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A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, LONDON TELEPHONE NUMBER—5356 GERRARD

No. XXV. OF VOL. II., 1911.
No. 4607. Vol. CLXXXI. LONDON, SATURDAY, DECEMBER 16, 1911. Pp. 160—Price 6d.

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The Hunterian Lecture
ON
THE INTRA-ABDOMINO-PELVIC PRESSURE IN MAN.

Delivered before the Royal College of Surgeons of England on Nov. 17th, 1911,

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MR. PRESIDENT, LADIES, AND GENTLEMEN,—Last year, in my lectures on the Evolution of the Pelvic Floor,[20] I referred that process to the necessity for a pressure within the body cavity which as evolution proceeded became more and more important.

RELATIONSHIP BETWEEN VISCERAL PRESSURE AND METABOLISM.

This conclusion was based on the association that step by step with the advance in structure a corresponding increase in dominance over the environment obtained; the two changes, the one in structure, the other in activity, running along such parallel lines, and the association being of such an intimate nature as to have a causal relationship. On the one hand, we saw that as the abdominal wall began to be differentiated the first indication of a pelvic floor appeared; that as the abdominal wall further evolved a similar advance in the pelvic floor was found; and that still more marked changes occurred in it with the appearance of the thoracic diaphragm: from which it was clear the development of these three musculatures was correlated, mutually dependent on a common cause, which itself increased in intensity from stage to stage. And, on the other hand, an analysis of the progressive change in the habits and conditions of life, exhibited by members of this series, revealed this cause to be a progressively increasing demand for a more and more effective internal pressure. For I showed how the medium in which the animal lives must influence the pressure within the body cavity, of which even in the fish an increase was necessary for visceral acts; that to obtain the same effect as before, the same return of blood from the viscera to the heart, the body wall of air-dwelling vertebrates had to be more active than that of water-dwelling vertebrates; that with the advent of ribs the excursions of pressure had to be greater than in animals without a thorax, since the greater quantity of air inspired necessitated an amplified expiration; and that with the establishment of mammals, characterised by a still greater increase in activity, still greater excursions had to occur. Throughout the series we have a progressively heightening metabolism of the organism as a whole, called forth by the necessity for greater activities, exemplified at each stage, demonstrating once and for all the intimate relationship between the visceral pressure and general metabolism.

SOME OF THE PROBLEMS TO BE CONSIDERED.

It is plain if this generalisation be true—if an adequate internal pressure has been and still is of such importance in the lower vertebrates that their respective positions in nature have only been reached and maintained by the adaptation of the muscles enclosing their viscera in each class for such an end—we ought to find in man a similar and a correspondingly advanced association; correlated with his remarkable predominance, the musculatures enclosing his viscera should be the best developed of all the vertebrates; and arguing from analogy, their purpose should be the production of an intensified internal pressure. If so, we should find evidence that the pressure is not merely a passive result of visceral weight as some have supposed [9 15 17 25] or caused indirectly by the muscular contraction maintaining the body in equilibrium, as others have thought,[23] but that it is produced for a purpose of its own, which reacts on the body as a whole; and inversely, that when this complicated muscular mechanism becomes defective in one or other direction, producing an average pressure too high or too low, a general bodily effect ensues; we ought to discover with the resulting pressure change deviations from the normal, pathological states, dependent on its rise or occurring with its fall.[24]

Such are the problems involved in a consideration of the intra-abdomino-pelvic pressure in man. To-day, it is impossible to treat the subject with completeness; time only permits some fundamental points may be touched on; but especially do I wish to show that besides the very considerable pressure caused by activity and straining—to which the term "intra-abdominal pressure" is so often limited—even during posture and rest, a pressure is maintained within the abdomen; and next, that during activity and all active postures, this pressure is due mainly or even entirely to the contraction of the muscles enclosing the viscera, which even during recumbency participate in its production, and so that the visceral weight is correspondingly negligible; and finally, to refer briefly to the physiological significance of this pressure.

HIGH DEVELOPMENT OF THE ENCLOSING MUSCULATURES IN MAN.

We may first notice man indeed falls within the generalisation referred to; for a comparison of the three enclosing musculatures in terrestrial pronograde mammals with those in him shows that the maximal advance in development has been reached in the human type. The pelvic floor musculature, instead of enclosing a very narrow wedge-shaped space, as in carnivora—in which most probably of all pronograde mammals the greatest excursions of visceral pressure occur—presents in man as a wide slightly concave sheet, forming a true floor, a real supporting structure, its upper surface opposing more or less at right angles the down-thrust of the viscera, and therefore being more capable of resisting a longer sustained and a more direct—i.e., a greater—pressure from above than occurs or can occur in the former animals. The abdominal wall and thoracic diaphragm show corresponding advances. In the former, the transversales, size for size, are much thicker and stronger; Professor Keith[11] has shown that with the assumption of the upright carriage the muscle has gained about one-third in weight. And the diaphragm is not only better developed, but its attachments pass much more deeply into the abdomen,* so that we have, according to the same observer,[11] two distinct types of this muscle—one found in animals which go on all fours, and one peculiar to animals that walk erect. This greater development of the transversales and of the diaphragm in orthograde mammals cannot have been required to maintain the body in equilibrium when erect by a direct action on skeletal parts; nor can it be supposed that the advance in the diaphragm has been caused by a change in the elasticity of the lungs.

FUNCTION OF THE ENCLOSING MUSCULATURES.

What can the function of these extensive musculatures be if not to contract upon the collective viscera in the abdomen and by compressing them to cause a pressure effect? Let us briefly consider their action. The two transversales with their intermediate tendon form a continuous sheet, closely applied at the front and at the sides to the visceral mass, their fibres passing for the most part horizontally from one side to the other. Since the lumbar and pelvic fibres, when they contract, cannot in any way cause an approximation of their skeletal attachments, the resulting effect must be a compression of the viscera to which they are apposed, tending to displace the lower ones into the pelvis, causing a pressure there, and simultaneously preventing a descent of the epigastric viscera. Contraction of the epigastric fibres, however, which arise from the margin of the costal arch on each side, may cause a narrowing of this arch and a diminution in volume of the thoracic base, and a consequent displacement of the epigastric viscera and with them of the diaphragm upwards into the chest; but if the diaphragm prevent this upward displacement, a narrowing of the thoracic base will not occur, but the pressure therein will be maintained raised.

That such an effect will occur when the transversales contract will be readily granted; for instance, during straining and laughing and similar acts, no one will dispute that a considerable visceral pressure occurs in which the transversales participate. But the question to be considered is, when do these muscles not contract, when is their relaxation complete? I cannot to-day attempt to answer this question. I can only remind you that even during apparent rest the

* The diaphragm is better developed in aquatic mammals than in man; this is due to the density of the water in which they pass so much of their time, and does not vitiate the argument.

fibres of striated muscle are in a state of partial contraction or tone (Pembrey [21]), which determines a pull on their skeletal attachments. If this be admitted, it is clear, provided the diaphragm simultaneously exerts a pressure downwards, that even during rest a visceral pressure exists. We must remember the transversales are well-developed muscles, and consequently play some considerable part in the economy of the body, for if they did not function their regression would occur. That their purpose is to cause a pressure effect is indeed indicated by their phylogeny; for they first appeared in the amphibia, just in those vertebrates, that is, for which a terrestrial life with all its possibilities began, and for which the emergence from the denser medium of water to the much lighter one of air was a definite accomplishment.

That the thoracic diaphragm is similarly concerned with causing a pressure effect within the abdomen, by tending to thrust the epigastric viscera downwards, is indicated by the high position of its trefoil tendon, the steep descent of its costal fibres, and the remarkable length and muscular development of its crura, which reach far into the abdomen—as low as the second and the third and even the fourth lumbar vertebræ: just the very anatomical conditions, in conjunction with those of the abdominal wall, by which a pressure effect within the abdomen could be most easily produced. And were it not that the diaphragm separates the abdomen from the thorax, and is as closely related to the lower thoracic viscera as it is to the upper abdominal, no one would doubt it to be a compressor of the latter and that it is an abdominal muscle.

THE DIAPHRAGM AND NEGATIVE PRESSURE IN THE CHEST.

But the negative pressure within the chest introduces a difficulty: for continuously exerting an aspiratory effect on the diaphragm, it has been thought to have drawn the diaphragm upwards and to be the cause of its high position; and for this reason, and because the diaphragm participates in inspiration, it has been assumed to be a purely respiratory muscle, that it exists only to overcome the elasticity of the lungs, and that, except when violently contracted as by straining, it does not compress the abdominal viscera. In line with this conception, it has been supposed the epigastric viscera are maintained in position, suspended, by the negative pressure within the thorax, and that in the erect posture, since they tend to gravitate downwards and to drag the diaphragm with them, they not only aid the diaphragm in overcoming the elasticity of the lungs, but cause a partial vacuum in the epigastrium—that is, that the pressure there is negative. It has even been thought, both formerly and recently, that the adhesion of the pericardium to the diaphragm below, and its attachment to the fascia of the superior mediastinum, and so to that of the neck above, forms one of the chief supports of the diaphragm and plays a part in the support of the abdominal viscera. The Roentgen rays, however, demonstrate that descent of the central tendon occurs (Keith); so it is clear this mediastinal fascia, which does not prevent such descent, cannot be the cause of the high position of the epigastric viscera. These epigastric viscera, moreover, extend a little higher into the chest laterally in the regions of the cupolæ than centrally in the region of the attachment of the pericardium, and, what is more remarkable, the heavy right lobe of the liver reaches a little higher than the stomach in the left hypochondrium.

ACTION OF THE DIAPHRAGM.

At first sight, the negative pressure in the thorax may appear sufficient to explain the high position of the epigastric viscera, just as Matthews Duncan [3] supposed the thorax expanded, and Schatz [23] stated the intercostal muscles hypertrophied, in pregnancy to help bear the heavy uterus by an increased suction upwards. And, in the same way, the mere weight of the epigastric viscera may appear sufficient to explain the descent which occurs on change from the supine to the erect posture. But this hypothesis takes no account of the structural condition of the diaphragm. Much more likely is it that the descent of the epigastric viscera, which occurs on rising to the erect from the supine posture, is caused to a large extent at least, if not mainly or entirely, by the diaphragm actively depressing them, or rather rotating them, downwards and forwards, a movement which determines the enlargement of the thoracic base, and results in an increase in the vertical diameter of the chest. By this enlargement of the thorax and change in the abdomen the pressure within each is so altered that the difference between them becomes greater; indeed, the pressure within the epigastrium, as measured within the stomach, is, according to Moritz, absolutely increased. Thus, more blood is squeezed into the thorax towards the heart, so that the aortic pressure may be raised on standing and the cerebral circulation safeguarded in this otherwise dangerous position. Such action of the diaphragm could only be rendered effective by the abdominal wall resisting the descent of the epigastric viscera; and this opposition affords an adequate explanation of the structural development of the diaphragm, and at the same time indicates that the position of the epigastric viscera is dependent upon the reaction between these two musculatures.

For it is unlikely the diaphragm would be so well developed were it a purely respiratory muscle, and had only to overcome the elasticity of the lungs, because the force this elasticity exerts is comparatively small. If this were all we should expect the diaphragm in man, instead of being better developed than in the terrestrial pronograde mammals, to be no better developed; and if in man the weight of the viscera really assists the diaphragm, it ought not to be even as well-developed as in these lower mammals. Further, we should expect expiration to be a physical elastic recoil permitted by relaxation of the diaphragm, but due to shrinkage of the lungs, instead of being effected, governed, and controlled by muscular action as Professor Keith has pointed out that it is.[12] Indeed, we find the negative pressure in the thorax is not suddenly produced at birth, but develops slowly—is, indeed, not demonstrable during the first four days of life, and at the eighth day of life, according to Hermann,[6] is only −0·4 mm. Hg, so that in the first few days of life the elasticity of the lungs does not come into play for expiration, yet expiration occurs, and it can only be produced by a muscular contraction of the body wall muscles.

At this time the act must be comparatively difficult; and, like so many other phenomena in the early life of man, represents in this feature, more or less, the conditions which prevailed during the early evolution of the vertebrates, when expiration, first attempted, became established—an accomplishment effected by the development of the external oblique muscles of the body wall, which evolved to meet and overcome this at first seemingly insuperable difficulty. The increase in elasticity of the lungs has rendered the act easy in adult man; but the ease of its accomplishment is a spurious reason for the argument that expiration is a passive recoil, and that muscular activity does not determine it; for many contractions of muscle occur and continue of which we are unconscious—such, for instance, as that of the transversales during rest. But, even in the adult, the apparently passive expiration has a limit, beyond which expiration can only be continued by a forcible contraction of the body wall muscles, in spite of the fact that the lungs are still elastic and a negative pressure still persists in the thorax, as it does even after the most forcible expiration. This forcible contraction of the body wall muscles has to be made even in the supine position, when the weight of the epigastric viscera, in so far from hindering, may even facilitate it; it is, indeed, easier to effect in the erect posture than when lying down, probably because the volume of the thorax is larger in the former position and the difference of pressure within it and the abdomen greater; clearly, it is produced to overcome the resistance of the still contracted diaphragm, for there is no other structure than the diaphragm to occasion it.

From this it seems reasonable to infer that the continued contraction of the abdominal wall in ordinary expiration is required, not because the lungs are unable to shrink without it, but because the diaphragm opposes the act—opposing it, not violently, but gently, therefore expiration is easy; but opposing it with a force which is greater, not less, than the force of the elastic recoil of the lungs, for the reason that the pressure in the abdomen must remain ever greater than that in the thorax. Thus, in the abdominal type of breathing expiration is effected by the abdominal wall actively pushing up the epigastric viscera, and with them the diaphragm, in spite of its continued contraction, by which means a pressure in the abdomen greater than in the thorax is assured. That the diaphragm continues to exert a pressure downwards during ordinary expiration is shown at once by the fact that the pressure in the stomach does not become negative or reach zero during ordinary expiration,[13] as we should expect

it to do if the diaphragm became flaccid and allowed an equalisation of the very different pressures on its opposite sides to occur.

CONTINUOUS DOWNWARD PRESSURE OF DIAPHRAGM.

That the diaphragm, by its contraction, usually exerts a pressure downwards upon the epigastric viscera is clear from these considerations; that it usually does so when it violently contracts no one will deny. But the question again arises, When does the muscle not contract? The necessity for a continued activity of the abdominal wall muscles during expiration, when we should expect the diaphragm to relax, shows that the elasticity of the lungs is insufficient to overcome the diaphragm even when partially inhibited. From my study of this subject I have come to the opinion that the diaphragm only becomes completely relaxed—that is, flaccid—exerting no traction downwards on the thoracic side, and no pressure downwards on the abdominal—when the pressure in the thorax becomes raised and equals that in the abdomen, as may occur when straining movements are made with the glottis closed. This is exemplified by the act of coughing. In this act, after a breath has been taken, the glottis is closed and the pressure in the thorax considerably raised by an increased contraction of its muscles; the glottis is then opened, and a blast of air escapes. The escape, however, is peculiar in this, that it is not sustained; moreover, not only is the outrush of air suddenly checked, but a great and rapid rise of pressure in the abdomen is produced, which is propagated downwards throughout its cavity, bulging the hypogastrium and being transmitted into the pelvis. This, it seems to me, is determined by a sudden contraction of the diaphragm, the stimulus for which is the sudden lengthening of its fibres, made possible by a state of relaxation and caused by the rapid fall of pressure in the thorax. At all other times the diaphragm is contracted, even during expiration, and the force it exerts downwards is not only sufficient to overcome the elasticity of the lungs when these can distend, but to cause a compression of the abdominal viscera which it is able to do, provided they be of sufficient bulk, in virtue of the resistance offered by the abdominal wall.

For it is to be noticed that if by expanding the thorax the lungs be distended to their utmost so that they can stretch no more, or if they be prevented from distending by a closure of the glottis which can be voluntarily produced, however much the diaphragm contract, it will not be able to descend. Under these circumstances, if the spine be extended, the pressure in the epigastrium may easily become negative, epecially in thin individuals, in spite of a continued contraction of the enclosing muscles. The enlargement of the thorax causes an advance of the sternum, and this with extension of the spine causes the abdominal wall to become recurved, unless the volume of the viscera be unduly large. The resulting negative pressure may be due in part to the tendency of the epigastric viscera to sag downwards; but more probably the powerful recti muscles, which have a considerable width in the region of their thoracic attachments, play a greater part in the production of this negative pressure at least when it is marked. For instead of being bulged forwards, or running from the thorax to the pubes in a straight line, they are drawn inwards towards the spine by the transversales; and instead of adding to, or not affecting, the internal pressure, by tending to advance and to enlarge the abdominal cavity, they diminish the pressure. Thus, Professor Keith distinctly states that by taking a deep thoracic breath *and holding the abdominal walls as rigid as possible* he was able to produce a negative pressure of −4 mm. Hg in the stomach.[13] By such maximal inspiration the pressure in the chest, which at the end of ordinary inspiration equals about −7·5 mm. Hg (Howell)[10], sinks to about −30 mm. Hg or more (Howell)[10], so that even here we have a relatively much greater pressure in the epigastrium. It is obvious that a similar and greater negative pressure can be produced by expanding the thorax with the glottis closed, when the lungs are only partially distended, as after an expiration.[17] In this case, since air cannot enter the lungs, the diaphragm is forced to ascend in spite of its contraction, and a considerable enlargement of the thoracic base occurs into which the epigastric viscera pass, the abdominal wall being markedly drawn inwards. These conditions, however, are uncommon events in the body, the former occurring during yawning, the latter perhaps in the initial stage of vomiting; so that for practical purposes we may say the diaphragm is continuously exerting a pressure downwards upon the epigastric and other abdominal viscera.

The combined effect of the abdominal wall and thoracic diaphragm is thus to cause a general compression of the abdominal viscera. These, we find, have definite shapes, even the hollow intestinal tract, as sections of the frozen body show, and the more solid organs facets on their surfaces—clear evidence of how they all are compressed against each other and the enclosing walls during life, demonstrating, too, how by opposing each other and these walls they are maintained in place and are not suspended in the normal by any ligament. The pressure so caused in the large and extensive abdomen is propagated to the pelvis, which in its phylogeny, and indeed ontogeny, has reacted by an adaptation of its structure to successfully withstand it. We have already referred to the change in its floor. The shape of its cavity has also altered in that it has approached the form of a hemisphere—i.e., the form of greatest possible capacity with smallest superficies, a feature which distinguishes it from the pelves of all other animals, and is an indication in itself that a pressure continuously existed within it during life.

MANIFESTATIONS OF THE INTRA-ABDOMINO-PELVIC PRESSURE.

I pass on now to the manifestations and measurement of this pressure in man, and to a brief examination of the values found which may be expected to throw light on the mechanism of its production and to verify or disprove our tentative conclusions.

At the outset it is to be remarked that no evidence of a pressure caused by the tone of the abdominal wall and thoracic diaphragm can appear when these muscles are rendered more or less inactive as by general anæsthesia. The fact that on laparotomy in a well anæsthetised subject the intestines do not bulge out through the wound, nor air rush into the peritoneal sac, is no proof that during conscious life a pressure due to such muscular activity does not exist within the abdomen; and yet this observation appears to have caused doubt or denial of such pressure.

And experiments which put out of court this muscular activity are similarly void; such, for example, as those of Quirin,[22] who found immediately under the abdominal wall in anæsthetised animals a pressure which varied from 0 to 13 mm. of water;† and those of Hörmann,[9] who killed his animals outright, and then discovered that immediately beneath the abdominal wall no positive pressure existed. Nor do the experiments of Kelling,[15] who found in starving dogs which were not anæsthetised that the pressure within the abdomen immediately beneath the anterior abdominal wall in the dorsal decubitus was nothing (0), negative a tone of the abdominal walls in the normal dog, much less in normal man; for it is plain that the volume of the viscera plays a part in the pressure effect caused by the activity of the enclosing muscles, that the muscles will more easily cause a pressure when the visceral mass is large than when it is small. Reference has already been made to the occurrence of a negative pressure in the epigastrium of man, when the chest is maximally expanded and the spine hyperextended; this negative pressure is not due to an absence of tone of the abdominal wall, but to the action of the recurved recti muscles, which tend to pull the linea alba forwards and so to enlarge the abdominal cavity and thus to obstruct the action of the transversales which is to diminish it, and as a consequence the pressure within falls. So in starving dogs, in which the visceral mass is rendered small, it is not surprising that no positive pressure should obtain; for the depth of the epigastrium, i.e., the distance from the xiphoid process of the sternum to the spine, is very considerable in dogs, and the course of the recti highly arched. Moreover, the tone of the muscle itself cannot be so good in animals reduced by starvation; nutrition, clearly, is a factor in this question.

Nor must we be deluded into denying the existence of this pressure, because usually we are unconscious of it. Whilst we may recognise that a pressure change occurs within the abdomen during the straining associated with visceral acts, the fact that we are unconscious of a similar, though much smaller pressure when the body is maintained in various postures and during rest is, of course, no proof that such

† Contrast this with Lewis,[16] "The average pressure in the abdomen of 10 anæsthetised cats, lying on the back with the limbs gently fixed, was 2 mm. Hg." (Ibid., p. 242.)

pressure does not exist. Indeed, we are unconscious of the pressure in the abdomen when it is very considerably raised, as occurs during active movements, even violent ones, when the pressure may be greater than that associated with the straining for visceral acts; this, as Schwerdt[24] naively remarks, is because at such times we think of other things.

MEASUREMENT OF THE INTERNAL PRESSURE.

It is easy to convince oneself that a considerable pressure within the abdomen is produced by straining: the impulses caused by cough afford a ready example. But to show the existence of a pressure during rest and posture, it is necessary to use a manometer and to connect it by means of a tube with the interior of some viscus such as the rectum or stomach. It is best to fix a small bag, such as an ordinary thin rubber finger-stall, on to the end of the tube; this prevents the contents of the viscus from entering the tube and vitiating results. The bag is partially distended with air, so that whilst pressure changes may be transmitted to the manometer, the elasticity of the bag itself plays no part in their production; the bag is then passed; or it may be passed first, and then a known small amount of air pumped into it. It is necessary to see that there is free play of pressure between the bag and the manometer, by getting the patient to cough: if the mercury does not respond immediately, the bag must be readjusted, as kinking sometimes occurs. When this is done, if the subject is caused to assume different postures, different pressure-values are found, which for the same posture are always approximately the same.

Thus, in the case of the rectum, one finds in the left lateral position, the subject lying at ease, a positive pressure of 6 to 8 mm. Hg. On turning more on to the face and assuming the semi-prone position, the mercury is seen to fall and may reach zero, or a small negative pressure may be found; whilst, when lying flat on the back, but still at ease, the mercury rises and the rectal pressure is found to be considerably higher than when on the side. If the patient be now asked to get into the knee-chest position, a negative pressure of −6 to −8 mm. Hg will be found to occur; but to obtain this the thighs must be vertical, the chest low on the couch, and the back well arched so that it forms a marked concavity; otherwise a decided positive pressure may still persist. On standing erect an intra-rectal pressure of 20 to 28 mm. Hg is registered. On asking the subject to bend forwards whilst still standing, so that the body becomes horizontal, a fall of pressure to 10 to 18 mm. Hg occurs, rising again when the patient stands upright—this without corsets.

Effects of Movements.

If the manometer be watched as the subject changes from one position to another, elevations of pressure, at times quite considerable, will be noticed to occur; these are, of course, due to the active process of moving. As the required attitude is attained the mercury falls and becomes fairly stationary; often, however, subsequently falling a little more as the position becomes easy and the subject's attention is directed away from herself, the muscles then relaxing as much as they will. Even under such circumstances small oscillations, rhythmic in character, frequently occur, and are due to respiratory movements.

The effect of more violent movements upon the internal pressure can be studied by asking the patient to overcome external resistances. Thus, if whilst she is bending forwards she lifts a fairly heavy weight, a considerable increase of pressure results; according to my observations the pressure rises to 46 to 64 mm. Hg. It may, however, be much higher, reaching 120 mm. Hg (Keith). The effect of straining can be gauged by asking the patient to bear down when in the left lateral position. The mercury rises as a rule slowly, registering a pressure of 52 to 72 mm. Hg or even higher; and it remains raised and fairly stationary as long as the breath continues to be held and the straining effort is prolonged; on releasing the breath the mercury falls to its original position. The increase of intra-abdomino-pelvic pressure incident to straining is therefore characterised by its gradual rise and its sustained elevation. On coughing, the mercury shoots up to 80 or 100 mm. or more; but it falls as rapidly: the act causes but a momentary impulse.

Pressure-Values in the Epigastrium.

Coming now to the pressure-values in the epigastrium, it is established beyond doubt, by the work of Schwerdt,[24] Kelling,[13] Moritz,[17] and Keith,[13] that the pressure in the stomach in the normal—with the single exception already referred to—is always positive, even in the erect posture. Professor Keith, in his article on visceroptosis, puts it down from 4 to 8 mm. Hg during expiration, rising to 12 mm. Hg during inspiration.[13] Negative pressures, however, other than those produced by expanding the chest with the spine extended, have been found: but these are generally small and almost negligible, such values as −0·5 to −1·5 cm. of water having been given by Schreiber. These have been attributed by others either to faulty technique (Moritz), or to pathological conditions—e.g., enteroptosis (Keith).

As in the case of the pressure within the rectum, changing the posture changes the pressure within the stomach. As the average of numerous observations on himself, Moritz gives the following:—

Lying on back	6·3 cm. H_2O	equals	4·6 mm.	Hg.
Sitting	8 ,,	,,	5·8 ,,	
Standing erect	7 ,,	,,	5·1 ,,	

Thus the pressure in the stomach when sitting is slightly greater than when standing, and when standing is greater than when lying down; in all positions it is considerably above the atmospheric pressure, but what is of greater significance from the point of view of causation of this pressure, it is slightly greater in the upright posture than when lying down. This compares very well with Schatz's observation[23] that while the pressure in the rectum on standing erect measures 23 cm. H_2O, on sitting it is increased to 32 cm. H_2O, but on lying down falls to 14 cm. H_2O. It must be stated, however, that Schwerdt[24] gave higher values for the horizontal (13·5 cm. H_2O) than for the upright (11 cm. H_2O), and I also found a similar condition in a pregnant woman near term. My observations on stomach pressure, however, have been insufficient to form an opinion on this matter. From the work of Moritz[17] and the evidence of accurate and extensive observations his paper contains, however much one may disagree with his interpretations of his results, the figures he gives may be accepted.

Just as the pressure in the rectum is increased when the subject rises from the recumbent to the erect posture, so the pressure in the stomach is increased when the body is lowered from the horizontal position and inverted, by which means the stomach occupies the lowest part of the abdomino-pelvic cavity. Thus Moritz found:[17]

Lying flat on back	7 to 8 cm. H_2O	equals	5 to 5·8	mm. Hg.
Body inverted (i.e., thorax depressed)	20 ,,	,,	14·7 ,,	
On back again	6·5 ,,	,,	5 ,,	

A repetition of the experiment gave:—

Body inverted	19 cm. H_2O	equals	13·9	mm. Hg.
Flat on back	7 ,,	,,	5 ,,	

It is to be noticed that the figures representing the pressure in the stomach when it is dependent are much less than those found in the rectum in the erect posture. If gravity is the effective cause of the pressure, surely the pressure in the stomach, when the body is inverted, should be approximately equal to that in the rectum in the erect posture.

Activity produces considerable elevations of the intragastric pressure, just as it does of intra-rectal pressure; during the change from one posture to another considerable increments of pressure occur. Thus, moving the arms or legs, or holding a weight at arm's length, produces an increase. Schwerdt found the intragastric pressure increased from 11 cm. H_2O to 24 cm., when 5 kg. were held with the arm stretched horizontally forwards, and that it reached 59 cm. when 10 kg. were so held. Keith found on bending down and lifting a heavy weight, the pressure within the stomach rose to over 70 mm. Hg.

CAUSES OF VARIATION OF PRESSURE-VALUES.

From these measurements it is obvious a considerable range of pressure occurs within the abdomino-pelvic cavity. The pressure is different in different parts for the same posture; it changes in the same part with change of posture; and considerable elevations occur with active movement. The question is, What is the cause of these pressure-values, and why do they vary so? To get at this we must analyse and critically examine them.

There are but three factors, by the summation of which the pressure within the hollow viscera, as measured clinically, is produced. First, there is a possible pressure caused by the viscus itself, due to the musculature in its

walls actively contracting on the contents. Next, there is the pressure imparted from the viscera above in virtue of their weight; the remarkable changes occurring with change of posture appear to show its importance. Last, there is the pressure caused by a compression of all the viscera by the body wall and diaphragm enclosing them; as is evident at least from the changes of pressure produced by activity.

Possible Pressure caused by the Viscus Itself.

It is first necessary to discover whether the visceral walls participate in the production of the pressure-values, to an extent at least of masking the other factors. At first sight it seems that they do so; that they possess a certain degree of tone, rhythmically varying; and that visceral processes can only occur by their increased contraction. And yet in the case of the cardiac region of the stomach, and in that of the rectum in the intervals between successive defæcations, from which viscera the pressure-values given were obtained, all the evidence points the other way; that the pressure caused by a tonic contraction of their walls is so small as to be negligible from this point of view. There is no doubt that during active visceral processes a rise of intravisceral pressure occurs quite apart from any pressure outside the viscus. Moritz has shown that the passage of food from the stomach into the duodenum is determined by an active contraction of the pyloric part of the stomach, with the production of very considerable pressures within this part, rhythmically recurring; yet he also showed that during the same act variations of pressure within the cardiac part of the stomach, due to a contraction of its wall, did not occur or were so slight as to be scarcely perceptible. Indeed, from the pressure record he obtained, it seemed the stomach was quiescent even after a large meal had been eaten, whilst, in fact, it was digesting and passing the food onwards, as shown by its being empty at the end of the experiment. The only noticeable pressure changes occurring in the cardiac part of the stomach during this process, the observation of which lasted for four hours with a short break, were elevations due to respiration and those caused by the cardiac beat; these were considerable, and, of course, not due to a contraction of its walls. No one will think that defæcation occurs without a considerable rise of rectal pressure due to a contraction of its own musculature, but in the intervals between the acts of defæcation what evidence is there of any marked contraction or even of tone in the rectum? And, naturally, for these clinical observations one chooses a quiescent interval. The fact that all the viscera are closely packed within the abdominal cavity, in consequence taking definite shapes, and the occurrence of a negative pressure within the pelvic viscera when the abdominal walls are relaxed, as in the knee chest position, clearly indicate the tone of the visceral musculature is so trifling that the hollow viscera are readily affected by changes of pressure immediately outside them.

Moreover, if a pressure within the hollow viscera is necessary for their functioning, and if such a pressure already prevails within the body cavity, there seems no reason for the visceral walls to be sustained in continuous contraction of any extent, or indeed to contract at all, unless the pressure within, as in the antrum pylori, is to become for some reason or other considerably greater than in adjoining parts. The function of the hollow viscera is not only to propel their contents onwards, but their walls are actively engaged in glandular, assimilative, and excretory work, just as the pancreas, liver, and kidneys; and whilst at first sight one inclines to the notion that a tonic contraction of the hollow visceral walls occurs and must influence the pressure, because of the existence of their musculature and the known tonic contraction of smooth muscle in the vascular system, we find in the solid viscera, equally important organs, no musculature other than that belonging to their vessels, so that these at least have not the means themselves to produce a pressure within them, except that caused by a swelling of their cells combined with the resistance of their capsules. In line with this, we find the visceral musculature characterised by the extraordinary slowness of its contraction; whilst the body wall muscles are remarkable for the rapidity with which they react as well as for their power of sustained contraction. It is evident that the rapid changes of pressure found in the hollow viscera to result from movement, and the considerable excursions which occur, are due to the rapid sequence of contraction and relaxation of the body wall muscles and diaphragm, not to any supposed alteration of tone or contraction of the visceral walls themselves; for the variations of pressure occur simultaneously with every movement of the patient—the mercury in the manometer responds immediately to such change—and, moreover, they correspond with the magnitude of the movement, being greater when the movement is greater, less when the movement is less.

Part Played by the Viscera in Virtue of their Weight.

Whilst it will be generally admitted that the elevations of pressure incidental to movement are caused by the increased contractions of the body wall muscles and diaphragm, difficulty arises when we consider the cause of the pressure found during the maintenance of posture; such different values are found in the rectum in the erect and recumbent positions that at first sight it seems the rectal pressure must be due to the weight of the visceral column above it; and the great majority of writers, with the notable exceptions of Schatz, Schwerdt, and Keith, believe the visceral weight to be the determining factor. Moritz was so impressed with the results of change of posture on the pressure values he obtained that he attributed the intra-abdominal pressure to the effects of gravity almost entirely, and thought if the enclosing walls play any part it is but a very restricted one. Thus he explained the differences in the intra-gastric pressure obtaining between the upright and horizontal positions to the different extent the liver weight is transmitted to the stomach in each position, for when standing or sitting the liver must press more on the stomach than in the dorsal decubitus. Yet the differences between the pressures given by Moritz for these several positions are so small as to make one doubt the validity of this explanation. Whilst the intragastric pressure when standing is 7 cm. H_2O, when lying down it is still 6·3 cm. H_2O. One would think, if the liver weight is the main cause of the pressure when standing, that in the dorsal decubitus a considerable fall should occur. More significant is it to find that in the two vertical postures—sitting and standing—in which the liver weight, as Moritz admits, is the same for each, a difference in pressure occurs, actually greater than that between the pressures found when standing and lying down. Moritz explains the difference between these two vertical positions as probably caused by the alteration of the inclination of the pelvis and a diminution of volume of the abdominal cavity, which the change from standing to sitting causes, with a resulting increase of pressure. But how such increase of pressure can occur unless the abdominal wall and other enclosing musculatures participate is difficult to understand. And if the increase of pressure found in sitting over and above that found in standing is due to muscular action, it is just as likely that the lesser increase found in standing over and above that found in the dorsal decubitus is similarly produced; and further, if the enclosing muscles play a part in the pressure variations which occur with change of posture it is as likely as not they are concerned in the maintenance of the pressure during posture.

When we come to examine the pressure values found in the rectum for different postures the same conclusion that the visceral weight is inadequate as the only or the main cause is also forced upon one. One can scarcely attribute the pressure in the left lateral position—6 to 8 mm. Hg—to the weight of superimposed viscera, for the rectum lies buried in the rigid pelvis and the part in which the pressure is measured—the rectal ampulla—abuts against the concavity of the pelvic floor, and the rigid side of the pelvic cavity arches over it as a sort of roof, and in this position there are no superimposed viscera. Equally convincing is the significant increase of pressure which occurs when the patient turns from the left lateral position on to the back, lying flat and at ease. The increase may be so great that the pressure is doubled, and, more remarkable still, on standing the pressure may be only further increased by a similar amount. These results compare very favourably with Moritz's observations on the stomach pressure for corresponding positions. In the right lateral (i.e., in which the liver weight is put out of court and the patient lies on a couch) the intragastric pressure was 3 to 5 cm. H_2O (2·2 to 3·7 mm. Hg); but on turning on to the back it rose to 6·5 to 9 cm. H_2O (4·7 to 6·6 mm. Hg); whilst on standing erect the pressure averaged 7 cm. H_2O (5·1 mm. Hg). Since the weight in the dorsal decubitus is borne by the extensive surface of the posterior abdominal

wall and is thus distributed over a wide area, one cannot concede that gravity can be the cause of such an increase of pressure in the rectum which occurs on changing the position from the side to the back. Nor can one attribute the pressure in the rectum when standing erect to the effect of the visceral weight, since the increase which occurs with change from the dorsal decubitus to the erect posture is no more, or not much more, than occurs on turning from the side on to the back.

Moreover, the effect of inverting the body on the pressure values found in the, for the time being, lowermost and uppermost poles of the visceral mass is altogether discordant with the hypothesis that the pressure is due to the visceral weight. For when standing the pressure in the rectum is 20 to 28 mm. Hg, whilst in the inverted, or at least in the knee-chest, position it sinks to − 6 to − 8 mm. Hg, but for corresponding positions the pressures in the stomach are 5 to 6 mm. Hg and 14·7 mm. Hg respectively. The effect of inverting the body is, therefore, to cause a much greater difference of pressure in the rectum than in the stomach, in spite of the visceral column being approximately the same. It is clear the weight of the superimposed viscera is insufficient to explain the pressure values found, and if the pressure in the stomach in the inverted position is due to the weight of the superimposed viscera, as is probable, the pressure in the rectum in the erect posture must be due to some other additional force. The only explanation can be that in the two postures the tension of the enclosing muscles is different; that in the erect position it is high, in the inverted it is low.

But the increase in tension in the erect posture is not everywhere the same, for if even the abdominal wall had merely to overcome the influence of gravity on the viscera, the lower, infra-umbilical part would have to offer a greater resistance than the supra-umbilical part, just as the lateral pressure of a viscous fluid on the side wall of a vessel containing it increases with its depth. But in the erect posture the increased tone of the infra-umbilical belly wall as compared with that of the supra-umbilical is required, not because, or merely because, it has to bear a greater part of the visceral weight—it has, indeed, to overcome the tendency of the viscera to sag downwards and to resist as well the effect of the contraction of the enclosing wall above—but because it has to force the blood in this part of the body cavity, and that coming from the lower extremities, to a greater height—viz., to the thorax. This necessity is clearly evident in the erect posture, but when the body is inverted it disappears.

COMPRESSING EFFECT OF THE ENCLOSING MUSCULATURES.

These considerations dispose of gravity as the effective cause in the production of the intra-abdomino-pelvic pressure for most postures—a conclusion confirmed by finding a positive pressure in the stomach in the erect posture at ease. Were gravity the only factor concerned, the pressure in the stomach should be at least not positive; indeed, we should expect it to become negative, just as the pressure within the rectum actually becomes in the knee chest position. The only alternative is that the effective factor in the pressure formation for most postures, just as it is the one to which the great excursions of activity alone are due, is the compressing effect of the musculatures enclosing the viscera; that the intra-rectal and intra-gastric pressures are due for the most part to the general pressure within the pelvic and epigastric poles of the visceral mass respectively, and are caused by the viscera pressing against each other and against the walls enclosing them; and that the differences in pressure found in these parts in any one posture except unnatural positions, such as the knee chest or inverted, are due more to a *difference in tension* of the respective segments of the musculatures than to the effect of the weight of the superimposed viscera, which, though playing some part, appears to be more important than it really is, at least in the erect posture, the position of activity.

INTRA-ABDOMINO-PELVIC PRESSURE AND THE CIRCULATION.

Coming now to the physiological significance of the intra-abdomino-pelvic pressure, indications have already appeared that its function is a circulatory one, and that by this means it affects the body as a whole.

As we have seen, the abdominal wall and thoracic diaphragm are antagonists, opposing each other, and doing so by means of the viscera in virtue of their bulk and incompressibility. In other words, they are coördinated; and in this coördination the pelvic floor musculature participates, and it would be strange if the thoracic musculature were not similarly involved. The purpose of all these musculatures is to cause a pressure effect within the body cavity, to the end that a greater pressure shall prevail in the abdomen than in the thorax, just as in the abdomen itself we find evidence that the pressure in the lower part is greater than in the epigastrium even in the supine position (rectal press. 10 to 14 mm. Hg and stomach press. 4 to 5 mm. Hg).

At first sight it seems the function of the diaphragm is a respiratory one, causing an entry of air to the lungs and this alone; but Mosso[18] and others have shown that more air can be respired by a purely thoracic breath than by a purely abdominal one, and thus costal respiration is the more effective from this point of view, as it was the primitive method of breathing. But respiration, to serve its purpose, requires not only that the stale air in the lungs should be refreshed by an additional supply, but that the lung tissues should be simultaneously flooded with an increased volume of blood. This accession of blood during inspiration is determined to a certain extent by the fall of pressure in the thorax itself, which acts, as Lewis[16] has shown, by diminishing the pressure in the pericardium. Thus more blood passes through the lungs on inspiration; and this results, perhaps, as well by thoracic as by diaphragmatic breathing, since both increase the negative pressure in the pericardium; although the influence of the diaphragm may be greater in this respect because of its direct attachment to the pericardium. This is supported by the phylogeny of the diaphragm, for, as Keith has shown,[14] it was primarily a circulatory muscle, directly influencing the dilatation of the heart by a traction on the pericardium.

But the diaphragm, by increasing the pressure in the abdomen, has a further effect than this. Leonard Hill[7] has demonstrated that if the inferior vena cava be opened in the thorax in a cat each time the diaphragm descends blood gushes out, and in the intact animal it gushes from the abdomen into the large venous reservoirs directly connected with the right heart, which is thus supplied with a larger volume of blood, and consequently the general blood pressure rises. But when respiration is purely costal the usual inspiratory rise of intra-abdominal pressure may fail, or even fall below zero, the compression of the abdominal viscera lessens or ceases, no such gush of blood occurs, and the general blood pressure falls (Lewis). This, then, is a reason for believing that the average arterial (aortic) blood pressure is lower in the thoracic type of breathing, as in reptiles and birds, than in the abdominal or combined type, as in mammals; and that in woman, who certainly uses her diaphragm less than does man, the general blood pressure is lower than in the male (Oliver[19]),‡ and may explain the fact that in man himself breathing generally becomes thoracic in the supine position (Mosso), in which posture an aortic blood pressure for the supply of the brain may with safety be lessened.§ Thus, the intra-abdominal pressure influences the aortic blood pressure, raising it, and other things being equal, increasing the blood velocity towards distant parts. By this means not only are the viscera themselves and the skeletal muscles better supplied with blood, but more especially the brain, carried high on man's shoulders, is adequately and rapidly provided for, in spite of the opposing action of gravity. Thus, in enteroptosis, in which the intra-abdominal pressure is lower than normal, we find all the symptoms of neurasthenia appear.

INFLUENCE OF INTERNAL PRESSURE ON THE VISCERA.

But there is another result of the intra-abdomino-pelvic pressure, and that is its influence on the viscera themselves. Quite apart from the maintenance of the several organs in their respective positions within the body cavity, which the compression of the whole visceral mass by the ever-contracting muscles enclosing them cannot help but determine, and which is their most obvious and perhaps least important function, the pressure so caused has other purposes. Clearly it tends to limit the distension of organs, and probably is an effective agent in preventing undue dilatation of the hollow viscera, as for example, may occur from fermentative processes. This it may do in two ways, either directly by

‡ In women the pressures are generally from 5 to 10 per cent. less than in man.

§ See also François Franck.[4]

supporting the viscera, or indirectly by influencing the circulation through them, and this probably is much the more important. For by compressing these viscera within certain limits it supports the capillaries within them, and thus by raising the capillary blood pressure it increases thy velocity of blood flow through them. Thus it materiall affects the metabolism of the hollow organs and other abdominal viscera, assisting and hastening it.

As is well known, disorders of digestion are perhaps the most frequent concomitants of early enteroptosis; and nothing cures these cases of flatulent dyspepsia more efficiently than a routine involving muscular exercise, such as golf; the resulting increased tone of the whole muscular system affecting the body-wall muscles as well as those of the limbs, and the capillary circulation of the stomach and other viscera becomes improved. That the intra-abdomino-pelvic pressure has such an effect on the visceral circulation becomes clear when the dynamics of the capillary circulation are considered, of which Dr. Leonard Hill is such an able exponent.

It may, of course, be objected that the thin-walled capillaries, permeating the viscera, could be easily obliterated, especially when the intra-abdominal pressure is very greatly raised, as during straining and violent movements; and, becoming greater than the blood pressure in the arterioles supplying them, the capillary circulation would, for the time being, cease. And no doubt this occurs, at least to some extent, just as when a muscle hardens, the capillaries within it must be occluded. But such elevations are usually brief, so that the cells do not suffer. It is probable that elevations of internal pressure are associated with, or cause reflexly, a dilatation of the visceral arterioles, just as the arterioles of a muscle dilate when the muscle hardens; and so when the phase of relaxation succeeds the phase of increased tension or contraction, a considerable flooding of the visceral area, as of the muscle, occurs. At least it is well known that violent exercise, such as horse-riding, influences most beneficially what people call "their liver," and this can only occur by means of the flow of blood through the visceral capillaries being affected.

Thus, the intra-abdomino-pelvic pressure, even that maintained during posture and rest, subserves most important circulatory functions. It not only quickens the whole circulation, but renders the blood richer and purer in a shorter time; and this is the reason of its far-reaching effects on general metabolism. By maintaining a high aortic pressure it lays the foundation for an efficient cerebral circulation so important to man; it is, indeed, by its means that man has been able to evolve and is able to maintain a vigorous and strenuous life, both physical and mental, in spite of his erect carriage and the elevated position of his brain.

In conclusion, I would again emphasise the importance of this pressure. Unfortunately, the subject is not only of academic interest, for aberrations from the normal abound amidst the populace, and in my experience form perhaps the commonest of the ills to which man is heir.

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A YEAR'S WORK IN

ABDOMINAL AND PELVIC SURGERY

IN THE ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON-TYNE, AND IN A PRIVATE HOSPITAL DURING 1910.

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STATISTICS of an exceptional character have a value of their own. They show what *can* be accomplished by skilful operators who make a careful selection of cases, or who have had exceptionally fortunate experiences; but they are apt to mislead practitioners unacquainted with the details and the difficulties of surgical practice, and also to induce too confiding patients into the belief that surgical operations can be undertaken with impunity.

A record of every operation performed during a whole year seems to me to represent the best method of indicating the probabilities of success or failure, as against indication of those possibilities which are of little use to the majority. The statistics offered (Tables I. and II.) refer only to operations performed by myself, and apply not only to the viscera but to all the structures of the abdomen and pelvis. The relative paucity of minor and of emergency cases is due to the fact that the great majority of these are operated upon by the junior staff.

In a former paper of mine[1] the statistics of my abdominal and pelvic work during the period of office of my last full-time house surgeon in the old infirmary (November, 1905, to February, 1906) were given, and it was suggested that they might later prove of some historical interest. Until the latter end of 1909 it was difficult in the new infirmary to get any satisfactory statistics, and impossible to obtain proper records of cases, as there was only one surgical registrar for the whole institution. Since then each surgeon has had a registrar of his own, and a complete record of the surgical work has become possible.

In the paper referred to it was stated that the old Royal Infirmary of Newcastle—which was vacated in 1906—established claim to be considered the worst hospital in the British Isles, as certainly as the present institution can claim to be the best. It is of interest to compare our surgical results in the miserable and apparently inadequate place we left with those obtained in the costly and palatial building in which we now work.

In the paper quoted above I wrote:—

> So far as I can judge, the only serious drawback in connexion with the old building was the frequent occurrence of pneumonia after, or even independent of, operation.

Even this, however, is now discountable, in view of the fact that pneumonia appears to be as prevalent in the new as it was in the old institution, the structural defects of which must be exonerated from special blame.

It seems to me certain, since our experience has proved it, that surgical results are not influenced by the costly and elaborate arrangements of the modern hospital, but that they depend upon strenuous personal endeavour on the part of everyone concerned to carry out the simple essential requirements of present-day surgery.

I am responsible for the charge of 48 beds, and the staff comprises an honorary surgeon, an honorary assistant surgeon, an honorary registrar, an honorary house surgeon, a paid anæsthetist (he receives £80 a year), and an indefinite number of dressers, varying from two to six, according to supply. There are three sisters in charge of the wards in which I am interested, but only one of these (in the male ward) works solely under my supervision, for in the women's and children's wards more than one surgeon acts. Each of these wards has, in addition to the sister, one staff nurse and three or four probationers.

The operating theatres, four in number, are supervised by

[1] Edinburgh Medical Journal, February, 1907.

TABLE I.—*Statistical Summary of Operations on Abdomen and Pelvis in 1910.*

Compiled by Mr. C. M. F. Saint, M.B., B.S. Durh., Surgical Registrar *pro tem.*, and Mr. R. J. Willan, M.S. Durh., F.R.C.S. Eng., Surgical Registrar at the Royal Victoria Infirmary, Newcastle-on-Tyne.

Nature of disease and operation.	Recovered	Died	Total
Hernia—			
Inguinal	109	—	109
Femoral	14	—	14
Umbilical	6	1	7
Ventral	7	—	7
Epigastric	1	—	1
Laparotomy—			
Exploratory for cancer	1	—	
,, ,, other conditions	6	1	7
Stomach and duodenum—			
Gastrostomy	4	2	6
*Gastro-enterostomy	54	5	59
*Partial gastrectomy for cancer	4	1	5
*Pyloroplasty	2	—	2
*Perforating gastric and duodenal ulcers	5	1	6
Exploration for stomach cancer	6	1	7
Liver—			
Abscess and tumour	6	2	8
Gall-bladder—non-malignant conditions	27	2	29
,, cancer	2	1	3
Pancreas—			
Tumour, &c.	4	2	6
Small intestine—			
Obstruction, &c.	9	2	11
Large intestine—			
Appendicitis	94	—	94
Carcinoma	7	6	13
Other conditions, non-malignant	12	1	13
Rectum and anus—			
Non-malignant conditions	39	—	39
Cancer	10	3	13
Spleen—			
Excision for rupture	1	—	1
Genito-urinary.			
Kidney and ureter—			
Nephrectomy	3	—	3
Nephro-lithotomy	3	—	3
Nephropexy	1	—	1
Nephrotomy and drainage	3	—	3
Partial nephrectomy	1	—	1
Uretero-lithotomy	2	—	2
Exploratory	3	—	3
Bladder—			
Suprapubic cystostomy	5	—	5
Lithotrity	2	—	2
Suprapubic lithotomy	2	—	2
Median lithotomy	1	—	1
Excision of benign tumour	3	—	3
Excision of malignant tumour	3	—	3
"Plastics" on vesico- and recto-vaginal fistulæ	3	—	3
Prostate—			
Suprapubic prostatectomy	17	2	19
Perineal prostatectomy	4	—	4
Other operations	9	—	9
Urethra	7	—	7
Testis and scrotum	15	—	15
Spermatic cord and penis	11	—	11
Vagina and vulva	2	—	2

TABLE I.—(*Continued.*)

Nature of disease and operation.	Recovered	Died	Total
Female Pelvis.			
Ovariotomy (for tumour)	18	—	18
Oöphorectomy (mammary cancer)	1	—	1
Exploratory operation	1	—	1
Salpingectomy (ectopic gestation and pyosalpinx	8	—	8
Broad ligament tumour	2	—	2
Hysterectomy—supravaginal	23	—	23
,, vaginal	15	1	16
Abdominal myomectomy	2	—	2
Other operations	11	—	11
Psoas abscess, &c.	10	—	10
Total	616	34	650

* Five partial gastrectomies (4 recoveries and 1 death) have been also included under posterior gastro-enterostomy; 1 perforating duodenal ulcer has also been included under the same heading; and 1 perforating pyloric ulcer (recovery) under pyroplasty. In making out the totals, these have only been counted once. In the extended list, therefore, 7 cases are down twice.

a sister, who is in charge of them all. The theatre in which my work is done has an instrument nurse, a sponge nurse, and an assistant nurse to do whatever she may be told.

Only the senior staff has any permanency. From the house surgeon onwards there are constant changes, each house surgeon being appointed for only six months of office. The fact that the chief object of the institution, apart from its duty to patients, is educational is fully realised, and though it is disappointing for the surgeon to know that almost as soon as assistants and nurses have gained the necessary skill to be of value to him it is their turn to leave, the experience is not altogether of disadvantage, if he constantly remembers that the best way to keep himself up to the mark is by teaching others.

During the early days of a complete change, however, the position is often a more trying one for the surgeon than any would suppose who have not experienced it. Each member of the senior staff is so fully occupied with his own work that he can attend to little else, and the most difficult undertaking must be faced with unskilled and frequently with too few assistants. This is wrong, and with regard to this matter, as in some others, a revolution is surely impending in the conduct of our hospitals.

Selection of Cases for Operation.

There is no more difficult problem in surgery than that which presents itself in making a proper selection of cases for operation. Anatomical, physiological, and pathological knowledge, diagnostic acumen, prognostic capacity, are all requisites of the good surgeon. Anyone can become a surgical mechanic. Capable surgeons are not so easily produced. It is so easy and so safe to cut everywhere "to see" that the surgeon is encouraged to operate in any case and in every case. The public applauds because something has been done. The surgeon and the public are apt to forget, until they receive an unpleasant reminder, that it may sometimes be wise to do nothing.

The first principle to bear in mind is that there is no special surgery of the abdomen, pelvis, or other region, as the text-books lead us to believe. The general principles of surgery must be observed in respect to all parts of the body, though neglect of this or that canon may be followed by more serious consequences in one part than in another.

One of the most important indications for operation in the abdomen, as elsewhere, is in connexion with *arrest of hæmorrhage*. Spontaneous hæmorrhage from any of the abdominal viscera, like spontaneous hæmorrhage from other parts of the body, is not subject to general laws, and each individual case requires consideration, if harm is not to result from operations undertaken to arrest it.

On the other hand, intraperitoneal hæmorrhage is a definite indication for an operation undertaken in order to see the bleeding point. If this principle had been kept in mind, the "lesson of the South African War"—to leave punctured

TABLE II.—*Detailed Statistics of Operations in Abdominal and Pelvic Surgery for 1910, comprising Private Hospital Cases and those Treated at the Royal Victoria Infirmary, Newcastle-on-Tyne, by Rutherford Morison, Senior Surgeon to the Infirmary.*

(Prepared by Mr. Saint, surgical registrar *pro tem.*; verified by Mr. Willan, surgical registrar to the Infirmary.)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Hernia.						
Inguinal.	Radical cure.	74	12	—	—	86
,,	,, and single castration.	1	—	—	—	1
,, with undescended testicle.	,, and orchidopexy.	10	—	—	—	10
,, ,, ,,	,, and castration.	1	—	—	—	1
,, with ovary and tube (with twisted pedicle) in sac.	,, and removal of tube and ovary.	—	1	—	—	1
,, with interval appendicitis, and secondly, volvulus from adhesions.	,, and appendicectomy.	1	—	—	—	1
,, with hydrocele of tunica vaginalis.	,, of both.	2	—	—	—	2
,, with anal fistula.	,, ,,	1	—	—	—	1
,, double.	,, double.	2	1	—	—	3
,, ,, with undescended testicles.	,, double, and single castration.	1	—	—	—	1
,, strangulated.	Herniotomy and radical cure.	2	—	—	—	2
Femoral.	Radical cure.	2	9	—	—	11
,, with hydrocele of sac.	,, of both.	—	2	—	—	2
,, strangulated.	Herniotomy and radical cure.	—	1	—	—	1
Umbilical.	Radical cure.	—	5	—	—	5
,, strangulated.	Herniotomy and radical cure.	—	1	—	1	2
Post-operative ventral.	Radical cure.	2	4	—	—	6
,, ,, with fæcal fistula.	Resection of small intestine, 9 ft., and radical cure.	—	1	—	—	1
Fatty hernia of linea alba.	Radical cure.	1	—	—	—	1
Peritoneum.						
Pelvic abscess; cause unknown.	Drainage, abdominal.	—	1	—	—	1
Retroperitoneal abscess, paracolic.	Laparotomy and drainage.	1	—	—	—	1
Tuberculous peritonitis.	Laparotomy.	3	1	—	1	5
Retroperitoneal malignant growth.	Exploratory laparotomy.	1	—	—	—	1
Stomach.						
Simple ulcer: body; lesser curve.	Posterior gastro-enterostomy.	6	9	1	1	17
,, ,, ,,	Posterior gastro-enterostomy: vicious circle? vomiting; second operation; entero-anastomosis; diarrhœa; death.	—	—	1	—	1
,, ,, ,, with hour-glass contraction.	Posterior gastro-enterostomy.	—	3	—	—	3
,, body; lesser curve, with hour-glass contraction.	Posterior gastro-enterostomy and gastroplasty.	—	1	—	—	1
,, body; rupture threatened.	Infolding of affected part of wall.	—	1	—	—	1
,, lesser curve and pylorus.	Posterior gastro-enterostomy.	—	1	—	—	1
,, pylorus.	,, ,,	3	—	—	—	3
,, ,, with stenosis.	,, ,,	3	—	—	—	3
,, ,, ,,	Pyloroplasty.	1	—	—	—	1
,, ,, ruptured.	,, through ulcer.	—	1	—	—	1
Carcinoma, irremoveable.	Exploratory laparotomy	4	1	1	—	6
,, ,, with gastro-colic fistula.	,, ,,	1	—	—	—	1
,, ,,	Posterior gastro-enterostomy.	3	—	—	—	3
,, removeable.	Partial gastrectomy.	1	3	—	1	5
,, of œsophagus.	Gastrostomy.	3	1	1	1	6

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
First Part of Duodenum.						
Simple ulcer.	Posterior gastro-enterostomy.	7	1	—	—	8
,,	Posterior gastro-enterostomy, with occlusion of pylorus.	1	—	—	—	1
,, with stenosis of pylorus.	Posterior gastro-enterostomy.	3	2	—	—	5
,, with pernicious anæmia, hæmatemesis, and melæna.	,, ,,	—	—	1	—	1
,, ruptured.	Laparotomy and closure.	2	—	1	—	3
,, ,,	Closure and posterior gastro-enterostomy.	1	—	—	—	1
,, pylorus and duodenum.	Posterior gastro-enterostomy.	5	1	—	1	7
Liver and Gall-bladder						
Liver abscess.	Drainage through thorax.	1	—	—	—	1
,, cirrhosis from yellow atrophy.	Omentopexy	—	—	—	1	1
,, hydatid cyst.	Laparotomy and removal (drainage).	—	2	—	—	2
,, ,, ,, (suppurating)	Laparotomy; drainage.	—	1	—	—	1
,, malignant growth (vascular)	,, and excision.	—	—	1	—	1
,, ,, disease.	Exploratory laparotomy.	1	—	—	—	1
,, subhepatic gumma.	Laparotomy and drainage.	—	1	—	—	1
Cholecystitis.	Cholecystostomy.	1	3	—	—	4
,,	Cholecystenterostomy.	—	1	—	—	1
Gall-stones in gall-bladder and cholecystitis.	Cholecystostomy.	3	10	—	—	13
,, ,, ,,	Cholecystectomy.	—	6	—	—	6
Gall-stones in gall-bladder with acute pancreatitis.	Cholecystostomy.	—	—	1	—	1
Gall-stones in gall-bladder and common bile-duct.	Cholecystostomy and choledochostomy.	—	1	—	1	2
,, ,, ,,	Cholecystostomy only.	—	1	—	—	1
Division of common hepatic duct during cholecystectomy.	Anastomosis of common hepatic and common bile-ducts.	—	1	—	—	1
Carcinoma of gall-bladder.	Exploratory laparotomy.	—	1	—	—	1
,, ,,	Cholecystostomy.	—	—	—	1	1
,, ,,	Cholecystectomy.	—	1	—	—	1
Pancreas.						
Traumatic ruptured pancreas.	Laparotomy and drainage.	1	—	—	—	1
Pancreatic cyst.	,, ,,	—	1	—	—	1
Chronic pancreatitis with interval appendicitis.	Cholecystenterostomy and appendicectomy.	—	—	—	1	
Carcinoma of pancreas with jaundice.	Exploratory laparotomy	1	—	—	—	1
,, ,,	Cholecystenterostomy.	—	—	1	—	1
Chronic jaundice of pancreatic origin.	,,	—	1	—	—	1
Rest of Small Intestine—Jejunum and Ileum.						
Acute intestinal obstruction.	Laparotomy and separation of adhesions.	—	—	1	—	1
,, ,, ,, adhesions due to puerperal sepsis, secondly volvulus.	Enterostomy.	—	—	—	1	1
Acute intestinal obstruction, strangulation by band.	Resection of 2 ft. of bowel.	—	1	—	—	1
Acute intestinal obstruction by Meckel's diverticulum.	Resection of affected bowel.	1	—	—	—	1
Paralytic ileus; kidney disease.	Laparotomy.	—	1	—	—	1
,, ,, no cause found, in patient with phthisis.	,,	1	—	—	—	1
Chronic intestinal obstruction—old appendicitis.	Separation of adhesions.	1	1	—	—	2
Chronic intestinal obstruction—old strangulated hernia.	Resection of bowel.	—	1	—	—	1

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Rest of Small Intestine—Jejunum and Ileum—(Continued).						
Chronic intussusception—polypus.	Reduction: enterotomy and removal of polypus.	1	—	—	—	1
Fæcal fistula.	Resection and lateral anastomosis.	1	—	—	—	1
Large Intestine.						
Appendicitis—acute non-perforative.	Appendicectomy.	2	2	—	—	4
,, ,, with general peritonitis.	,,	1	—	—	—	1
,, ,, perforative.	,, and drainage.	1	2	—	—	3
,, ,, with general peritonitis.	,, ,,	1	2	—	—	3
Appendix abscess.	Drainage only.	—	1	—	—	1
,, pelvic.	,, per vaginam.	—	1	—	—	1
,, ,,	,, per rectum.	1	—	—	—	1
,,	Appendicectomy and drainage.	7	6	—	—	13
,, with general peritonitis.	,, ,,	1	1	—	—	2
,, with chronic intestinal obstruction.	Separation of adhesions and appendicectomy.	1	—	—	—	1
,, with adherent bowel.	Appendicectomy and resection of 4 in. of bowel.	1	—	—	—	1
Appendicitis, interval.	Appendicectomy.	31	31	—	—	62
,, with tuberculous peritonitis.	,,	—	1	—	—	1
Tuberculous ileo-cæcum.	Ileo-colostomy.	1	—	—	—	1
,, ,,	Resection of ileo-colic distribution (Jamieson-Dobson).	3	2	—	—	5
Sigmoiditis.	Laparotomy.	1	—	—	—	1
Ulcerative colitis.	Cæcostomy.	—	1	—	—	1
Fæcal fistula.	Closure.	1	—	—	—	1
Old colostomy.	Closure of opening.	1	—	—	—	1
Sigmoido-vesical fistula (sacculitis).	Separation and closure of openings in bladder and sigmoid, and resection of bowel.	—	1	—	—	1
,, ,, ,,	Closure and resection of bowel.	—	1	—	—	1
Multiple papillomata with ulceration.	Cæcostomy.	—	—	—	1	1
Carcinoma, caput cæci.	Ileo-colic resection (Jamieson-Dobson).	—	1	—	—	1
,, ascending colon.	,,	—	—	2	—	2
,, ,, ,, with ovarian cyst.	,,	—	—	—	1	1
,, transverse colon.	Resection.	—	1	—	—	1
,, sigmoid.	,,	1	1	—	1	3
,, irremoveable ileo-cæcal valve.	Ileo-colostomy, lateral anastomosis.	—	—	1	—	1
,, splenic flexure.	Colostomy (permanent).	—	1	—	—	1
,, sigmoid.	,, (temporary).	—	1	—	—	1
,, ,, with sigmoido-vesical fistula.	,, (permanent), also appendicectomy.	—	—	1	—	1
,, ,, with secondary carcinoma of ovary.	Exploration and resection of adherent bowel.	—	1	—	—	1
Rectum and Anus.						
Prolapse of rectum.	Sigmoidopexy.	1	—	—	—	1
Stricture of rectum (syphilitic).	Colostomy.	1	—	—	—	1
Rectal polypus (benign).	Removal per rectum.	1	—	—	—	1
,, polypi (multiple).	Colostomy.	1	—	—	—	1
Carcinoma of rectum.	Examination under anæsthetic.	—	1	—	—	1
,, ,,	Exploratory laparotomy.	—	—	1	—	1
,, ,,	Colostomy.	1	—	—	—	1
,, ,,	Abdominal resection.	—	2	—	—	2
,, ,,	Abdomino-perineal resection.	1	1	—	—	2
,, ,,	Perineal resection.	2	—	1	—	3

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Rectum and Anus—(Continued).						
Carcinoma of rectum.	Kraske's operation.	—	—	—	1	1
,, ,, recurrent.	Local removal.	2	—	—	—	2
Hæmorrhoids.	Radical cure.	19	2	—	—	21
,, with fissura in ano.	,, ,, of both.	2	—	—	—	2
Fistula in ano.	Division of external sphincter.	5	1	—	—	6
Fissura in ano.	,, ,,	—	1	—	—	1
Anal ulcer.	Excision.	1	—	—	—	1
Stricture of anus (simple).	Dilatation.	—	1	—	—	1
Imperforate anus.	Examination under anæsthetic.	—	1	—	—	1
,, ,, (baby)	Colostomy.	—	1	—	—	1
Ischio-rectal abscess.	Incision and drainage.	1	—	—	—	1
Spleen.						
Traumatic rupture.	Splenectomy.	1	—	—	—	1
Genito-urinary Operations—Kidney and Ureter.						
Traumatic ruptured kidney.	Nephrectomy.	1	—	—	—	1
Renal calculus.	Nephro-lithotomy.	3	—	—	—	3
Moveable kidney.	Nephropexy.	—	1	—	—	1
Simple kidney cyst.	Laparotomy, partial nephrectomy, and excision of cyst.	—	1	—	—	1
Renal pain—calculus?	Exploratory nephrotomy.	1	—	—	—	1
Interstitial nephritis with hæmaturia.	Exploration.	1	—	—	—	1
Renal epistaxis—malignant?	Nephrectomy.	1	—	—	—	1
Tuberculous kidney.	Nephrotomy.	—	1	—	—	1
Pyonephrosis.	Nephrectomy.	—	1	—	—	1
Perinephritic abscess.	Incision and drainage.	1	1	—	—	2
Ureteral calculus.	Removal by suprapubic cystostomy.	—	1	—	—	1
,, ,,	Uretero-lithotomy.	1	—	—	—	1
Tuberculous ureter.	Exploratory laparotomy.	—	1	—	—	1
Bladder.						
Acute cystitis.	Suprapubic cystostomy.	2	—	—	—	2
Tuberculous ,,	,, ,,	1	—	—	—	1
Vesical calculus.	Lithotrity.	2	—	—	—	2
,, ,,	Suprapubic lithotomy.	2	—	—	—	2
,, ,,	Median lithotomy.	1	—	—	—	1
Benign tumour (papilloma).	Suprapubic cystotomy and removal.	3	—	—	—	3
Malignant ,, (carcinoma).	,,	2	1	—	—	3
,, ,, ,,	Suprapubic cystostomy only.	2	—	—	—	2
Prostate.						
Cystitis due to enlarged prostate.	Perineal cystotomy.	1	—	—	—	1
Chronic prostatitis.	Suprapubic cystostomy.	1	—	—	—	1
Prostatic calculus with abscess.	,, prostatectomy.	1	—	—	—	1
Simple prostatic enlargement.	Internal urethrotomy.	1	—	—	—	1
,, ,, ,,	Suprapubic cystostomy.	4	—	—	—	4
,, ,, ,,	,, prostatectomy.	15	—	2	—	17
,, ,, ,,	Perineal ,,	4	—	—	—	4
,, ,, ,, and papilloma of bladder.	Suprapubic removal of both.	1	—	—	—	1
Carcinoma of prostate.	Suprapubic cystostomy.	1	—	—	—	1
Acute retention; enlarged prostate.	Catheterisation.	1	—	—	—	1
Urethra.						
Urethral stricture.	Dilatation.	3	—	—	—	3
Perineal abscess from stricture.	Incision and drainage.	1	—	—	—	1
Urethral caruncle.	Radical cure.	—	3	—	—	3
Testis and Scrotum.						
Hydrocele of tunica vaginalis.	Radical cure.	7	—	—	—	7
,, ,, ,, double.	Double radical cure.	1	—	—	—	1
,, ,, ,, septic.	Incision and drainage.	1	—	—	—	1

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Testis and Scrotum—(continued).						
Hæmatocele of tunica vaginalis.	Radical cure.	1	—	—	—	1
Cyst of epididymis.	,, ,,	1	—	—	—	1
Tuberculous epididymitis.	Epididymectomy and vasectomy.	2	—	—	—	2
Septic hæmatoma of scrotum.	Incision and drainage.	1	—	—	—	1
Acute abscess ,,	,, ,,	1	—	—	—	1
Spermatic Cord.						
Varicocele.	Radical cure.	3	—	—	—	3
Hydrocele of cord.	,, ,,	2	—	—	—	2
Penis.						
Phimosis.	Circumcision.	1	—	—	—	1
Hypospadias.	Plastic operation.	3	—	—	—	3
Carcinoma of penis.	Complete removal of external genitalia and inguinal glands.	1	—	—	—	1
,, ,,	Partial amputation of penis with removal of glands.	1	—	—	—	1
Ovary.						
Mammary carcinoma.	Double oöphorectomy.	—	1	—	—	1
Ovarian abscess.	Ovariotomy.	—	1	—	—	1
Ovarian abscess, with interval appendicitis.	Ovariotomy and appendicectomy.	—	1	—	—	1
Ovarian neuralgia.	Laparotomy.	—	1	—	—	1
Ovarian cyst.	Ovariotomy.	—	4	—	—	4
,, ,, double.	,, double.	—	3	—	—	3
,, ,, dermoid.	,,	—	2	—	—	2
,, ,, with twisted pedicle.	,,	—	2	—	—	2
,, dermoid ,, ,,	,,	—	1	—	—	1
Ovarian dermoid with twisted pedicle and interval appendicitis.	Ovariotomy and appendicectomy.	—	1	—	—	1
Ovarian cysts, malignant.	Panhysterectomy.	—	1	—	—	1
,, ,, ,,	Double ovariotomy.	—	1	—	—	1
,, cystic hæmatoma, double.	,, ,,	—	1	—	—	1
Broad Ligament and Fallopian Tubes.						
Old broad ligament cyst.	Enucleation.	—	1	—	—	1
Broad ligament cyst.	Supravaginal hysterectomy and excision of cyst.	—	1	—	—	1
Ectopic gestation.	Removal of gestation.	—	3	—	—	3
Pyosalpinx.	Drainage per vaginam.	—	1	—	—	1
,, double.	Double salpingo-ovaritomy and hysterectomy.	—	1	—	—	1
,, ,,	Sapingectomy and hysterectomy.	—	3	—	—	3
Uterus.						
Endometritis.	Curettage.	—	3	—	—	3
,, with ovarian abscess.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
Chronic septic uterus with fibrosis.	Curettage.	—	1	—	—	1
,, ,, ,, fibroids.	Vaginal hysterectomy.	—	10	—	1	11
,, ,, ,, ,,	Supravaginal ,,	—	4	—	—	4
,, ,, with double ovarian cyst.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
Acute septic metritis with pregnancy.	Vaginal hysterectomy.	—	1	—	—	1
Menorrhagia with pregnancy.	Supravaginal ,,	—	1	—	—	1
Fibroid of uterus—submucous.	Removal per vaginam (polypus).	—	3	—	—	3
,, ,,	Laparotomy and myomectomy.	—	1	—	—	1
,, ,,	Supravaginal hysterectomy.	—	10	—	—	10
,, ,,	Supravaginal hysterectomy with left tube and ovary.	—	2	—	—	2

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Uterus—(continued.)						
Fibroid of uterus with twisted pedicle and pregnancy.	Laparotomy and myomectomy.	—	1	—	—	1
,, uterus with twisted pedicle.	Supravaginal hysterectomy.	—	1	—	—	1
,, ,, with ovarian dermoid.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
,, ,, with interval appendicitis.	Supravaginal hysterectomy and appendicectomy.	—	1	—	—	1
,, ,, with inguinal hernia.	Supravaginal hysterectomy and radical cure.	—	2	—	—	2
Carcinoma of cervix of uterus.	Curettage.	—	1	—	—	1
,, body ,,	Vaginal hysterectomy.	—	2	—	—	2
Displacement—prolapse.	Ventral fixation—hysteropexy.	—	2	—	—	2
,, retroversion.	Modified Alexander Adams operation.	—	1	—	—	1
,, prolapse (procidentia).	Vaginal hysterectomy and plastics.	—	2	—	—	2
Vagina.						
Recto-vaginal fistula.	Plastic operation.	—	1	—	—	1
Vesico-vaginal ,,	,, ,,	—	2	—	—	2
Dyspareunia.	Dilatation of vaginal orifice.	—	1	—	—	1
Vulva.						
Carcinoma.	Excision with inguinal glands.	—	1	—	—	1
Back.						
Psoas abscess—tubercle.	Radical cure.	3	2	—	—	5
,, ,, ,,	Examination, abdominal.	1	—	—	—	1
Necrosis of lumbar vertebræ.	Sequestrotomy.	1	—	—	—	1
Fractured coccyx.	Removal.	—	1	—	—	1
Coccydynia and hæmorrhoids.	Removal of both.	—	1	—	—	1
Recurrence of kidney carcinoma in skin.	Excision, wide.	—	1	—	—	1

wounds of the abdomen alone—would have included an emphatic exception in cases presenting symptoms and signs of intraperitoneal hæmorrhage, and the useless discussions and dangerous divergence of opinion as to "when to operate" in cases of leaking or ruptured ectopic gestation would have been avoided.

The next indication for operation I have to offer is in connexion with *wound exploration*. It should, for example, be a rule that no wound of the abdominal wall should be left without full exploratory operation. The object of this is to see, or at least to feel, the whole track of the wound. If the peritoneum is intact it should, of course, not be opened, but if perforated the fact should be known and action taken accordingly. Foreign bodies and dirt should be discovered and removed always and everywhere—an important point.

There are some *abdominal injuries other than external wounds* which indicate early operation. A sudden severe and sharply localised blow—such as that received when a horse kicks the abdomen—is practically certain to cause a rupture of some abdominal viscus, usually the small intestine. It is time to teach that such a history affords, by itself, a definite indication for operation. All doubts in doubtful cases should disappear if there are increasing pallor, increasing thirst and restlessness, with increasing rapidity of pulse, suggesting hæmorrhage; or if there are continued severe pain, marked local tenderness, muscular rigidity, thirst, vomiting, and a quickening pulse, indicating a leak in the gastro-intestinal tract. Operations performed early in these cases are remarkably successful; performed late they had often better not be done.

Prevention of Sepsis.

Sepsis is still the great cause of surgical mortality. Seldom at the present day due to defects in technique or wound

treatment, it is from failure to remove early enough the source of sepsis that disasters result.

There would be no percentage of deaths from *appendicitis* if every case commencing with acute pain [2] and developing tenderness and rigidity of the abdomen, and quickening of the pulse was operated upon within 12 hours. Surgeons can scarcely be blamed for the present deplorable death-rate. In season and out of season I have spoken out for more than fifteen years, and in every paper which I have written bearing on the subject I have emphasised the importance of removing the inflamed appendix in time to prevent septic infection of the peritoneum, recovery from which can only follow a dangerous and prolonged illness, with the possibility of a ventral hernia at the end of it. There is no other definite indication for operation in appendicitis, and none other needed, if only the vista of risks ahead is duly appreciated.

The prevention of sepsis should also be the aim of the surgeon in operations for *perforating gastric and duodenal ulcers*. Statistics I have recently published [3] corroborate all recent information to the effect that if these ulcers can be closed during the first 12 hours—i.e., before sepsis has secured too firm a hold—the patient's recovery can be confidently anticipated. If, on the other hand, delay has allowed of the development of general septic peritonitis, the chances of recovery are small, and may be rendered even smaller by operation. The totality of reasons for or against operation in these cases requires careful consideration.

The dangers of serious and destructive sepsis depending on the presence of gall-stones, bladder-stones, and kidney-stones, constitute the strongest of reasons for their early removal.

To Deal with Mechanical Obstruction.

No more important or more definite indication for operation can be offered than this. When a calculus is causing obstruction the symptoms are so grave, and the results likely to be so destructive, that the diagnosis should carry with it the recommendation of operation.

In regard to *kidney and ureter stones*, X rays show not only the presence of a stone or stones, but also their size and position. Only the smallest which have arrived at the lower end of the ureter should be left to the chance of passing by nature's effort. Elsewhere their operative removal, by skilled hands, is attended with less danger to life and to the integrity of the organs concerned than is their escape by the processes of nature.

The same holds good of *gall-stones*. Their removal by operation from the gall-bladder is safe and easy, and the results are satisfactory. After they have escaped into the ducts, however, the operation for their removal is likely to be dangerous and difficult. The most skilled operator may fail to find some of them, and recurrence of the attacks, or imperfect recovery, the result of septic changes in the ducts, liver, and pancreas, are not uncommon.

Short-circuiting off an obstruction in the gastro-intestinal tract has of late years become a useful and "fashionable" operation. For example, there is no indication so suggestive of the need for gastro-enterostomy as that provided by an ulcerating stricture at or near the pylorus. Entero-anastomosis has also very properly taken the place of enterostomy and colostomy in many cases of irremoveable stricture of the intestine. Instead of removing hydronephrotic kidneys, plastic short-circuiting operations are frequently done on the pelvis and ureter. Jaundice due to irremoveable mechanical obstruction can be cured by cholecystenterostomy.

The need for operation in cases of *intestinal obstruction* is universally conceded, since few cases are due to other causes than removeable mechanical obstacles; *but* the need for early operation has not yet received the recognition it should have received, and this is because the necessary diagnostic rules for intestinal obstruction are hard to formulate, and because without definite diagnosis a sufficiently early operation is seldom strongly enough urged.

The dangers of strangulated hernia and acute intussusception no longer exist, since early diagnosis and prompt operation have evaded them. The dangers of acute intestinal obstruction arising from other causes are still deplorable because the difficulties of early diagnosis have led to delay, and delay in the proper treatment of these cases means death.

Twists (volvulus) of the viscera cause such urgent and definite symptoms at their commencement that it is often possible to make an early diagnosis. I think it is not too optimistic to hope that a time will come when operation may be done on these cases soon enough to prevent the avoidable loss by gangrene of intestine, testicle, or ovary.

To Remove a Focus of Disease.

This is the most important of all indications for operation. Much that has been stated above would come under this head. It is *the* indication for operation in septic cases. In tubercle and cancer it is of prime importance, for it is almost certain that both of these commence locally, and for a time remain localised. Excision undertaken early enough would prevent all further development. An operation too deferred, when either disease has spread beyond the limit of the primary focus, would offer a very different prospect of success.

Exploratory Operation.

No other surgical measure requires such care and judgment as this, if good rather than harm is to follow. It is not enough that there exists a doubt in diagnosis which can only be cleared up by such an operation. There should be a reasonable probability of something organically wrong, something which demands treatment, and something likely to prove amenable to the mechanical methods of surgery. The less these conditions are satisfied in any particular case the more clear it is that operation is unnecessary, that more harm than good is likely to be done, and that the patient is exposed to risks which cannot be foreseen. One success should not be regarded as fairly balancing many failures, and it should further be realised that the discovery of unsuspected disease is seldom to the advantage of the patient or to the credit of the surgeon.

Speaking personally, I have no hesitation in saying that nothing in my practice has brought me such unhappiness as has exploratory operation. After a roving commission in the abdomen, and the removal of gall-stones, of a diseased appendix, and of an ovarian cyst, all necessitating the separation of many adhesions, I have found patients who were not only no better, but louder than ever in their complaints after their pathology had been fully dealt with. This has occurred to me often enough to prove that it is no coincidence.

Above all else in surgery stands the need for definite pathological knowledge, for an exact diagnosis of the lesion to be dealt with, and for courage enough to do nothing when the abdomen is opened unless there is a clear indication afforded on general surgical principles.

If an operation has been undertaken it is necessary that it should be completed. There should be no limit to either its duration or extent, if the completion of it offers, from a scientific point of view, a chance of life. Incomplete operations are never satisfactory and are more disastrous in their results than the most heroic when thoughtfully planned and skilfully executed.[4]

Contra-indications to Operation.

Operations, unless absolutely necessary for good surgical reasons, should never be undertaken on patients in whom nervous symptoms predominate. There are many unfortunate individuals with gastric, or intestinal, or hepatic, or renal, or testicular, or uterine pains known to every surgeon, and only too willing to undergo operation. Some of them the operation will cure; the majority, though relieved by it, acquire some other ailment equally troublesome, and a powerful minority, "made worse," preach in season and out of it against surgeons and all their works.

Another class suffers from indefinite abdominal ailments and seriously defective health. Some have proptosed viscera, ptosis of the stomach or colon, movable liver or kidneys, mucous colitis, chronic appendicitis, prolapsed ovaries, intestinal adhesions, &c. Many ingenious operations have been devised for their cure, but fixations, appendicostomies, plications, appendicectomy, the separation of adhesions, have all proved dismal failures. The future will show how far Mr. Arbuthnot Lane's brilliant work on resection of the colon will fulfil its present promise. Allowing for this exception, it is safe to say that, like the class previously referred to, they are cured, or relieved, or made worse by one or many operations.

[2] The history of the initial pain may be the most important evidence of an acute abdominal emergency when the patient is seen later.

[3] British Medical Association Annual Meeting, 1911.

[4] See paper of mine, "Mistakes in the Technique of Abdominal Surgery," Edinburgh Medical Journal, July, 1893.

Meanwhile these cases are not at all for the surgeon. Faith healing, "Christian Science," and Lourdes have already a far greater percentage of cures than surgeons can show. Further competition in a race so uneven is bad for the credit of surgery.

There are certain palliative operations which are useful, but which should not be done except as a last resource. They are such as entail discomfort through departure from the plan of the normal exterior of the body—e.g., gastrostomy for malignant stricture of the œsophagus, and colostomy for inoperable stricture of the large intestine. When a patient is hungry, and recognises that without surgical aid he is going to die by starvation, then an operation will prolong his life, and he will be grateful for the result of a gastrostomy. Many patients with malignant stricture of the œsophagus can swallow enough to keep them going, never feel hungry, and have no great desire to live. Gastrostomy will prove no blessing to them.

No operation gives more relief or satisfaction to a patient with intestinal obstruction than inguinal colostomy, but this is an operation which has been much abused. Because it is easy and safe it has been exploited in the treatment of a variety of conditions, in which I have heard patients many times declare that "the cure was worse than the disease." Careful attention and a considerable time devoted to unsavoury details will do much to make these patients' condition tolerable; but to suggest, as is sometimes done, that the operation is a surgical triumph shows an optimistic disregard for what ordinary intelligent people think about it.

Preparations for Operation.

Except in cases of emergency, our rule is to admit patients to hospital two days before operation. Careful examination is made of the general condition, of the mouth and teeth, of the lungs and heart, and of the urine. On the morning before operation one ounce of castor-oil is administered, and previous to operation a soap-and-water enema. Immediately before the anæsthetic is administered the mouth is rinsed out and the nose cleansed.

The skin covering the abdomen is prepared the night before the operation, first by thorough mechanical cleansing with spirit soap and hot water, and then by the application of a towel wrung out of alcohol, which is worn till the operation. Latterly this has been removed on the operating table and the abdominal skin painted with a 4 per cent. alcohol or chloroform solution of iodine.

All over the world operative technique is now very much the same, and every surgeon aims at keeping his wounds germ-free. That this has not yet been accomplished to the satisfaction of the bacteriologists is universally acknowledged, but surgeons know also that the essentials for safe and successful surgery are simple, inexpensive, and able to be carried out everywhere, if Lister's teaching be followed. Until surgical operations can be conducted with the same certainty as are bacteriological experiments there is room for improvement, and the best surgeons will always be found anxious to adopt suggestions that appear to add something to the chances of asepsis.

Until recent years I used nothing but antiseptics for the preparation of instruments, dressings, and hands. At the present time, in addition to this, I wear an antiseptic overall, boots, gloves, sleeves, cap, and a mask. Everyone engaged in the operation—assistants and nurses alike—does the same. Visitors to the theatre wear sleeveless overalls and masks, while the floor at the entrance to the operating theatre is sprinkled with 1 in 1000 corrosive solution to fix any dust on their boots.

The sterilised *instruments* are covered with 1 in 20 carbolic lotion, and immediately before the operation begins this is diluted down to 1 in 60. The operation site is surrounded with sterilised towels, and on the top of these other towels, wrung out of 1 in 20 carbolic lotion, are placed so that instruments can be laid upon them.

The gloved hands are frequently rinsed in 1 in 10,000 corrosive solution during operation, and any possible contamination implies prolonged and careful cleansing in 1 in 1000 corrosive lotion before the final rinsing in 1 in 10,000.

Ligatures and sutures are all prepared by the theatre sisters. With few exceptions catgut and silkworm-gut only are required. We use thin silk for the outer suture in gastric and intestinal cases, thick silk for the stay sutures in fat abdomens or cancer cases, and silk occasionally to tie a pedicle. The catgut is chromicised by McEwen's method, then boiled in alcohol under pressure, and finally placed in iodine spirit for eight days before use. Prepared in this way, we have had no trouble with it during a period of four years. Silk and the *fishing gut* are sterilised and kept in alcohol.

Mops are made of three types—large square, small square, and long strips. Every mop has attached to it one foot of tape, and a white pot ball the size of a walnut. Two nurses count the mops before operation, and the number is written up on a window, to be seen by everyone. On no account must a mop be cut during operation, and the same two nurses make a second count when closure of the wound commences. To some this may appear more than care. These critics have not seen so many sponges, instruments, and mops left in the abdomen as I have, and consequently do not know so well how easy it is for even the most capable to make such mistakes.

Anæsthetics.—Subject to my approval the choice of an anæsthetic is left to a skilled anæsthetist. When I am entirely responsible I prefer chloroform till the laryngeal reflex is abolished, followed by ether in an Ormsby inhaler for the rest of the operation unless the respiratory movements of the abdominal wall become too vigorous, or rigidity prevents satisfactory manipulation, when a short return to chloroform is indicated.

The instrument nurse.

Shock.—Though death from "shock" generally means death from hæmorrhage or sepsis, or from both, no one now doubts the separate and independent reality of shock. Little can be done when it has developed: much, on the other hand, to prevent its occurrence. The maintenance of body heat, avoidance of rough manipulations, morphine before operation, and care in regard to blood loss are the chief ordinary measures relied on. In feeble patients, or for prolonged operation, the slow intravenous transfusion of from one to two pints of saline solution (one drachm of table salt to one pint of water), at a temperature of 102° F., or continuous subcutaneous infusion of the same by the method of Mr. Arbuthnot Lane, are invaluable aids in warding off shock.

Incision.—The abdomen can be opened by an incision of any shape or position, but there are two incisions which inflict a minimum of damage on the abdominal walls, and which can also be most readily extended in case of need. These are the ideal incisions. The first is *straight* in the middle line. The second lateral and *oblique*, and runs parallel to the nerves in the abdominal wall.

I have always advocated incisions large enough to allow of sufficiently free access for easy manipulation, and in difficult cases to permit of inspection. These are secrets of good surgery no less in the abdomen than elsewhere, though sometimes forgotten. The longest incision will cause no subsequent weakness of the body wall if it is properly closed and healing is as satisfactory as it ought to be, while the shortest incision *can* allow of a hernia of the scar.

It is impossible to properly deal with such wounds as I have referred to by means of a single layer of sutures. The peritoneum should first be closed with a continuous suture of catgut. This is a most important step, because if any hole is left a portion of omentum—which should always be drawn down over the intestine—will find its way through and then enlarge and stretch the opening for further protrusion.

After the peritoneal suture a series of interrupted or stay sutures of silkworm gut, or silk, are passed through all the layers except the peritoneum, and their ends clipped on either side of the wound. They are inserted one inch apart, and through the skin one inch from its incised margin. The median line aponeurotic tendon or lateral muscles are brought into apposition by a thick strong cat-gut continuous blanket stitch, and the stay sutures are tied. Superficial silkworm gut sutures are used to secure perfect apposition of the skin edges.

Dressings.—Next the wound I use sterile gauze wrung out of alcohol, and over this a voluminous dressing of corrosive wood-wool, with the double object of maintaining heat and allowing of elastic compression by the many-tailed bandage.

After-treatment.

Nothing more clearly shows the advance of abdominal surgery than the changes which have occurred in respect to after-treatment.

All our hospital cases are now nursed in the general wards, and most of them get scarcely more attention than the fracture cases receive, for they do not need it. (Miss Walmsley, matron, reports that during 1910 only four patients were nursed by special nurses in my ward.) So long as these patients are sickly no food is allowed them—only water to drink. On the third or fourth day one ounce of castor oil is administered, and after this ordinary diet is gradually resumed. The dressing is changed, and the superficial skin sutures are taken out, on the tenth day. I often shiver when reading accounts of cases to learn that *all* the sutures were taken out on the tenth day. A fit of coughing, an attack of vomiting, a sudden gripe, may burst a wound open and allow intestine to extrude. This would almost certainly happen in cancer cases where the healing capacity is always deficient. Three weeks, as a rule, should elapse before the removal of the deep or stay sutures.

Thirst is always a troublesome symptom after operation. There is no good reason why patients should not be allowed to relieve it by drinking when they want to. If the water is cold, and it is for this they crave, too much should not be taken at a gulp. To be allowed a feeding cup constantly replenished with cold water, and to be sipping at it most of the time, gives them greater pleasure than anything else.

Sickness.—Any serious sickness can only be satisfactorily dealt with by washing out the stomach. A frequent result is that the continuous nausea and urgent vomiting which have resisted all the usual remedial measures tried, both cease after the first washing.

Morphia.—The pain following an abdominal section is usually greater than that associated with any of the ordinary or extraordinary illnesses of life, and my opinion is that it should be relieved. A long experience has convinced me that the advantages obtainable by the use of morphia exceed the disadvantages. Our rule is to give a quarter grain hypodermically the first night.

Bowels.—A trinity of symptoms follows every operation in which the peritoneum is opened: all patients are more or less sick, griped, and thirsty.

The gripes are relieved by the passage of flatus, and depend, I think, on irregular contractions of the muscular intestinal coat. Wearing a rectal tube may be an aid in mild cases, and a hot dry bran-bag over the dressing may give some relief. By the end of the second day, if flatus has not been passed, one ounce of turpentine suspended in a tumblerful of barley water, and followed by a pint of soap and water, may be administered as an enema. This can be repeated every two hours if necessary. On the fourth day one ounce of castor oil is given to all of my patients. Nothing else, so far as I have yet discovered, has the wonderful effect of this nauseous dose.

It is a good rule, at least in serious cases, not to give any food by the mouth so long as there is sickness, or until flatus has been passed.

In any case which is serious, either as the result of disease or of the operation, the continuous administration of normal saline by the rectum is an invaluable aid. The good effect of this is especially noticeable in cases of septic peritonitis, when the hollow-eyed, grey, Hippocratic face and the running pulse can be replaced in a few hours by a condition that indicates no grave illness.

Bladder.—The fashion of passing catheters in abdominal cases has largely disappeared, and with great advantage to the patient. A new house surgeon, however, requires to learn that a patient with no marked urinary symptoms may have a dry tongue and not be doing well because the bladder is not properly emptied. Especially with old people and women examination of the hypogastrium may offer a surprise in the shape of a distended bladder when only "the stomach" is complained of.

Prognosis.—In the majority of cases a prognosis can be offered before the patient leaves the operating table, since hæmorrhage, sepsis, and shock, the three great causes of death, are now to be regarded as complications of the operation, and seldom as the consequences of it.

The nurse.—In the after-treatment of abdominal cases nothing counts for so much as a good nurse. In a previous paper[5] my appreciation of this fact has been expressed:—

> Certain nurses have a knack of doing well with abdominal cases, and both patient and surgeon are lucky if they get hold of such a one. To be raised up comfortably and packed up skilfully with pillows at the back and under the knees into a half-sitting position for a time, even on the second day, is a great relief to most patients. Rolling over occasionally from the back to one side, then to the other, and back again, if it can be done without great trouble, as it can by a skilful nurse, is a change that most patients are grateful for. A little drink, a little well-timed sympathy and encouragement, even perhaps a gentle reproof on occasion, are things certain to make the difference between a happy and an unhappy patient, and I for my part believe that in the majority of serious cases the skilled attentions of an intelligent sympathetic nurse can, and do, account for the continuance of life and for escape from death.

If a patient has made entirely satisfactory progress up to the fourth day it is seldom that anything goes wrong.

Complications following Abdominal Operations.

Peritonitis.—A septic focus already present, which has resisted attempts to deal with it, may be the centre of a spreading infection and the cause of general peritonitis. It is possible, though now very rare, to have post-operative septic peritonitis from mistakes in technique.

The septic infection may be the result of leakage from a viscus damaged sufficiently to allow of its walls giving way later, *but* the most frequent cause, and one which should always be carefully borne in mind, is leakage from an unrecognised perforation. In separating adhesions of the stomach and intestines, or round the vermiform appendix, or in the pelvis, it is easy to make unwittingly a small opening in one of the hollow viscera, and to overlook it, unless the most careful testing is employed.

Whatever the cause of the peritonitis may be, it is usual to note nothing extraordinary till the end of the second or the beginning of the third day. The patient is usually depressed and sickly, the pulse steadily increases in rapidity, some distension of the abdomen, first noticed in the epigastrium, appears and the passage of flatus is interfered with.

The course now to be taken depends upon the diagnosis as to the cause, because another operation may give a patient the only chance left for life, or it may take away the only possibility of recovery. If the illness is the result of an overlooked and unrepaired leak a prompt operation may be life-saving. If the focus of infection cannot be removed or excluded—as in ordinary post-operative septic infection—prompt operation is likely to kill the patient.

[5] Abdominal and Pelvic Surgery, Edinburgh Medical Journal, January, 1904.

The best course in this serious condition, and one not without some hope, is to stop all food and drink by the mouth and the administration of all purgatives, to wash the stomach out frequently so long as there is sickness, to maintain the body heat by artificial means, including large hot applications to the abdomen, to administer as much fluid by the rectum as the colon will absorb, to maintain the heart's action by 1/20th grain injections of strychnine hypodermically every six or eight hours,[6] to give small doses of morphia hypodermically when there is marked restlessness, and if the patient recovers to keep a careful daily outlook for localised collections of pus in the abdomen. These should, of course, be evacuated as soon as discovered.

Pneumonia.—In the paper previously alluded to[7] the following words occur:—

> My impression is that pneumonia following operation in Newcastle Infirmary is much more common than elsewhere (it occurs in about 10 per cent. of my cases), but so far as I can judge it is the only serious illness *dependent on our overcrowded and insanitary building.* (Italics not in original.)

It is still true that pneumonia is more common in Newcastle than is ordinary elsewhere, but it is obviously not correct now to attribute it, as I did, to the overcrowded and insanitary building.

Some of it results from the administration of anæsthetics, especially ether, and from the inability to cough, owing to pain in the abdominal wound. The day after the operation these patients have some difficulty in breathing, some cyanosis, moist râles over the chest, quick pulse, and elevated temperature. If their treatment is undertaken at once it is possible to put a sudden end to the whole trouble. The accumulated mucus must be got rid of by coughing, and this is effected by raising the patient up in bed, supporting the abdomen with strong arms and hands, and then encouraging vigorous coughing.

Some of it is due to septic inhalation from the mouth, nose, or throat, and develops usually during the first week after operation. It has become more uncommon since we paid more attention to mouth, nose, and ether inhaler sepsis, and to prevention of the inhalation of vomited matter.

For the greater number of cases no satisfactory explanation has been found. The only suggestion I have now to offer is that the "change of air" in the infirmary has something to do with it. In the majority of Northumberland and Durham poor-class homes coal is so cheap that the fire in the kitchen is *never* out night or day. At night especially this room, with beds in it, approaches the temperature of an oven, while in the well ventilated wards of the infirmary it is but little warmer than outside.

It is the exception for these patients, unless very feeble, to die from their pneumonia.

Cystitis.—Since the use of catheters after operation has become infrequent, and house surgeons and nurses have known that they would be blamed should cystitis occur, this has become a rare event. It is fortunate, as I have known one patient who made an excellent recovery from operation for strangulated hernia, and another who had undergone a most successful perineorrhaphy, made chronic and apparently life-long invalids through post-operative catheter cystitis.

Intestinal obstruction.—Adhesions may form after any abdominal operation, and adhesions are the most common cause of intestinal obstruction, therefore after every such operation the possibility of their occurrence should be kept in mind.

The cases most likely to be concerned are those in which a local peritonitis was present before the operation—e.g., appendix abscess, or ovarian cysts with twisted pedicle—and it occurs with greatest frequency during the second or third week, when recovery seems to be assured.

I have already[8] drawn attention to the very great importance of early diagnosis and prompt treatment in this condition, because the evidence I have offered strongly favours my belief that all of these cases can be saved by an early operation, and that delay means death. If the trinity of signs—(1) severe paroxysmal pain, (2) inability to pass flatus, and (3) evidence of increased peristalsis—are present, the sooner an operation is performed the better. If there is doubt, one ounce of castor-oil, followed by an enema, is likely to clear it up by making the patient either worse or better, and so deciding for or against immediate operation.

Phlebitis.—One of the most disagreeable consequences of an abdominal or pelvic operation is femoral phlebitis. With extraordinary regularity it appears about the tenth day after operation, usually with a bad aching pain in the upper part of the thigh and extending down the leg, with a rise of temperature to 102° F., and with a feeling of decided illness, which lasts from a week to a month. Swelling of the whole leg soon follows. Rarely is the patient able to get about with any comfort in less than three months, and, as a rule, more or less serious traces of the trouble are left for the remainder of life.

A condition so serious surely deserves more careful study than it has yet received. The probabilities seem to be that it is due to sepsis, but it is certain that septic infection of the usual kind, and by the ordinary channels, has nothing to do with it, for it usually occurs in "clean cases which have healed straight away," rather than in such as are septic in the ordinary sense. The most strongly predisposing cause is anæmia from previous prolonged hæmorrhage, such as occurs in fibroids or cancer of the uterus, so that hysterectomy is one of the operations after which it may occur. The prognosis, so far as life itself is concerned, is good. However ill the patients may be it is rare for them to die.

It is also very rare in femoral phlebitis for clots to become detached and produce pulmonary embolism, possibly owing to the painfulness of the condition enforcing rest on the patient. So far as I have observed, pulmonary embolism much more commonly follows thrombosis of the saphenous veins or their tributaries than of the femoral trunk.

When the condition has occurred nothing does any good but rest. I believe that it may be prevented by rubbing the legs regularly and by exercising them several times a day in bed.

Parotiditis.—This is a very serious complication, though now comparatively rare. Its present rarity is due to the recognition of its cause—mouth sepsis—and to the use of means to prevent this.

Ventral hernia.—A certain percentage of patients—it should be a very small one—get a ventral hernia after abdominal operations. This may be unavoidable. It is so if the wound suppurates, it is so with fat muscular persons who are growing fatter, and it may be so with the wrecks of humanity who suffer from multiple hernia, proptosis of the viscera, and general laxity of all the tissues. The treatment is to cure, if possible, by an operation, and if not, to give support by means of a belt.

Where to operate.—So far as is possible, I operate only in a properly equipped hospital, because I *know* that the dangers of operation are many times multiplied if they are done at home. Painful experience has taught me that not only the avoidable mortality, but the avoidable accidents and complications in even a larger proportion are increased to an alarming extent by yielding to the patient's natural desire to remain at home. No statistics have, so far as I know, ever been offered to support the opposite view, and I think there are good reasons for this.

The objection has been advanced that the chances of a patient who is very ill are damaged by removal and the journey. Our statistics furnish a complete answer to this. The whole profession knows that the avoidable mortality following childbirth in home practice is more than double that in maternity hospitals. Is it not better that the public should be taught to hear truths through the profession, and take the responsibility of evading them, if they so desire, rather than that these truths should be "discovered" by them? It appears to me to be impossible to doubt that in this country in 25 years no woman will be confined, and no person have any operation done, except in a properly equipped hospital.

Newcastle-on-Tyne.

[6] In cyanosed cases I have seen improvement follow the introduction of one drachm of tincture of digitalis into the rectal injection.
[7] Edinburgh Medical Journal, January, 1904.
[8] THE LANCET, Jan. 31st, 1903.

THE NOBEL PRIZE.—On Dec. 10th at Stockholm the King of Sweden personally presented the Nobel Prize for medicine, chemistry, and physics respectively to Professor Allvar Gullstrand, Madame Curie, and Professor W. Wien.

VENEREAL DISEASE: ITS PRESENT AND FUTURE.

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AND
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(*Concluded from p. 1618.*)

HERE, then, is our problem. It has never been seriously faced. How are we to face it? Are we to follow the continental example and regulate the traffic in vice? Our answer must be an unhesitating negative. For a hundred years and more regulation in some form has been tried in most European countries. It was an old system, revived by Napoleon. It was not introduced to Russia till 1844, but from that date till 1888 it was universal on the continent. In Britain a similar system was partially introduced into military stations in 1864; it was twice amended, but public opinion became so hostile that by 1886 it was entirely done away. Opposition to it began in 1869, and the effects of this outburst of feeling in England have extended to the continent since that date. Italy followed suit in 1888; in most of the Swiss cantons regulation has been abolished, as it has also been in Denmark and Norway. All over the continent a great movement is on foot, which is bound soon to sweep away the system: in France, Germany, and Russia its days are numbered.

But since regulation—namely, restriction and compulsory examination of prostitutes—still finds favour here in some quarters, it is necessary that we should touch on this subject more fully. To begin with, we may state our opinion that regulation is wrong in principle and a failure in practice. Why is it wrong in principle? First, because regulation of any immoral traffic by the State is itself immoral. This is an objection of sound statesmanship, not of silly prudery. In regulation, certain duties are imposed on certain women, and the fulfilment of those duties implies the recognised right to carry on their traffic. The obverse of responsibility is privilege.

Secondly, the laws of regulation are unjust as between the sexes. The women are subject to pains and penalties while the men go scot-free. In justification it is alleged that the prostitutes are the source of all disease existing outside their ranks. For the most part this is true; but all these women have been infected by men. And the men must be regarded as primarily responsible, for it is the demand of men which creates the supply of women. But the system is as stupid as it is unjust. If you do not remove the infected men from circulation, who form the large majority of infected individuals, it is of no use to remove the women, either in this or in any other class of infection.

Thirdly, the system is unjust, not only between the sexes but between the classes; the lower or poorer class of women are penalised while the more well-to-do escape.

Lastly, apart from its unsoundness on the side of ethics and justice, the system of State regulation of vice is founded on a blunder. To combat disease it attacks prostitution. Now disease can be attacked as disease, but prostitution cannot be attacked as prostitution. Disease is due to one set of causes, prostitution to many. If all prostitutes were removed from London to-day their places would all be filled in a wonderfully short space of time. If you want to get rid of dandelions in your garden you do not go round cutting off their heads; you take them up by the roots. Prostitution is a noxious weed, which has for its roots moral, social, and economic conditions. Poverty is the cause which leads more than 50 per cent. of these women to sexual vice; it gives them a living. To many, indeed, seduction gives the start downhill; to others vicious surroundings, antecedents, parents, and relatives. But poverty is, beyond doubt, the chief factor.

With both sexes, overcrowding, which follows in the wake of poverty, leads—I had almost said drives—into promiscuous immorality. But, overcrowding apart, the main causes which operate with men are selfish wilfulness, false shame, ignorance, and alcohol. Wilfulness, because they go wilfully to satisfy their sexual appetite without thinking of the price that others must pay; false shame, because young men are ashamed to confess to their comrades sexual inexperience; ignorance, because there is a widespread view that chastity is prejudicial to health or induces sexual impotence—a most mischievous delusion; alcohol, because 80 per cent of venereal disease in man is contracted under the influence of alcohol, which numbs the higher faculties and leaves the blind physiological impulses unchecked.

Before you can suppress prostitution you must eliminate its causes; in time, we may hope they will be eliminated; but it is a long journey: in any case you cannot directly suppress prostitution; much less can you extirpate venereal disease by an attempt to suppress prostitutes.

For these reasons, then, we believe the principle of regulation to be wrong. Now for the practice. Can it be regarded as in any respect a practical success? No; it is a total failure. On this point the reports of the Brussels Conferences of 1899 and 1902 are eloquent. Professor Gailleton says: "It is absolutely no good." Professor Fournier, the eminent authority, who with Neisser opposes the abolition of regulation, can only say that "it does a little good"; while Pierson insists that whatever little good it does is far more than outweighed by its far-reaching evil effects. Moreover, the form of regulation which Fournier and Neisser desire is by no means the present system of "police des mœurs," but a form of scientific sanitary control. It is clear that at that conference no one could affirm the success of "regulation"; further, the comparison already made between England on the one hand, and France and Germany on the other, is not eloquent in favour of regulation, since in disease at least they have no advantage over us, who have no regulation.

Let us inquire into some of the causes that have made regulation a failure. When a girl first goes wrong, she does so, not as a regular prostitute, but clandestinely; in the first year of her irregular life she contracts disease; indeed, the age of maximum incidence in females is 18; so the mass of such girls, before the age of 20, are clandestinely spreading disease among their clients. In France it is believed that 66 per cent. of syphilis in females is contracted before the age of 22, and 7/8ths of all syphilis in prostitutes is the result of clandestine vice.

It might be thought that licensed houses would be at least relatively safe, and it is claimed that this is so in Paris; but there is much evidence in other capitals pointing in the opposite direction. From syphilis at least we should expect most of the women to be free, having already had it, since under most circumstances it is impossible to take syphilis twice; but unfortunately there seems no doubt that a woman, free herself from infection, may still act as a mediator of contagion, harbouring within her own body the germs which, harmless to herself, will yet infect another; so the disease may be carried by a woman who is herself without symptoms. Even apart from such considerations no medical man can, on the ground of ordinary inspection, give a guarantee that any woman is free either from gonorrhœal or syphilitic infection.

Hence the licensed houses engender in the individual a false sense of security, while from the national point of view they only deal at best with one-eighth of the disease. Add to this that the licensed house is not popular. As the stringency of regulation increases so do the numbers of houses and their inmates decrease. In Paris to-day the number of licensed houses is less than 50, while in 1860 there were 200; in the same period clandestine vice has more than doubled in volume. As for the character of these houses, we are told that they have two main uses: to supply the first debauch of the young man, and the later bestialities of the *roué*.

Thus from every point of view, whether individual or national, whether moral or physical, whether of theory or practice, the weight of all evidence is against the State regulation of vice. It has been tried for a century and failed. At the best it is an outworn system, dating from a time when the nature of venereal disease was unknown, its long persistence unsuspected, and its terrible consequences not even dreamed of, while in the interval economic conditions also, specially in regard to women, have so altered that sexual vice at the present day furnishes a different and more complex problem. Thus it is undesirable, as in view of public opinion it is impossible, that State regulation should be established in this country.

Prostitution is an evil of which no Act of Parliament will ever rid us; its roots lie deep in the moral, social, and economic conditions, which are only capable of very gradual

improvement. But with venereal disease the case is widely different. Venereal disease is not synonymous with prostitution; syphilis, for instance, was not with us till Columbus discovered America in 1492. It is a contingent evil, not a necessary one; as it came quite lately in the history of European prostitution, so it may disappear long before that history is closed. But if this result is to be obtained we must treat disease as disease, since it is disease that we wish to combat, and not, according to the older fashion, treat prostitution as a crime. We must strive to eliminate venereal disease on the same principles as we seek to destroy other infections, adopting such methods as are specially appropriate to its peculiar character.

There are, however, certain popular objections against launching a campaign of extirpation against venereal disease, and in dealing with these we shall define our moral attitude on the subject.

The first is that such diseases come as a divine retribution for self-indulgence. This will not bear examination. Divine retribution must be self-consistent. Now in the case of syphilis such retribution was not instituted, in Europe at least, till the end of the fifteenth century, and 400 years is but a page in the history of vice. Divine retribution must be just in its incidence. But these diseases fall on the innocent and guilty alike—innocent wives, innocent children, innocent doctors. Of all women who suffer from syphilis, according to Fournier, 20 per cent. have taken the disease innocently from their husbands; Schrank considers the proportion higher in Vienna. In gonorrhœa the proportion is about the same. In the case of married women with syphilis, 95 per cent. contract it innocently from their husbands (Blaschko). In such marriages the first child (Fournier) is always fated to death in the first year of life, if ever it comes to birth at all; of all children of such parents 50 per cent. suffer the same fate; some of the later offspring may be free of disease; if they are not so they may even hand it on to the third generation. Syphilis may also be innocently contracted by social, apart from sexual, contact, by a kiss, or by common use of many ordinary utensils. Doctors are often infected while discharging their proper duties. Infants infect wet-nurses, and nurses children. Such is the condition of syphilis of the innocent to-day—less terrible now than in former years, when the initial virulence was greater than to-day, and less terrible than in Russia at the present time.

In the case of gonorrhœa, which is so lamentably common in towns abroad as to be almost universal in men before 30 years of age, the young husband frequently transfers it to his wife, who in consequence is liable to disablement, sterility, or even death. If there be a child, it is liable to infection of the eyes at birth, which unless promptly dealt with, may result in total blindness. In Prussia 30,000 such blind persons are to be found. Children also are not infrequently infected about the genitals by infected linen, and are liable to have their health and career ruined.

On the whole, we may say that about 8 per cent. of adult venereal disease is innocently contracted, as well as all venereal disease in children. How can these things be regarded as an exhibition of retributive justice? From Abraham onwards good men have recoiled at the idea of God punishing the innocent with the guilty. The Book of Job, 2500 years ago, forcibly rejected the idea of disease as the vengeful visitation of God; the later prophets rejected it; and the greatest of all Teachers refused to admit disease as representing divine retribution.

But, authority apart, no one can look on syphilis and gonorrhœa day by day and still adhere to the hypothesis of retributive justice. If it were true, we ought to refuse to cure the disease, except where the divine justice had plainly miscarried; but I think no such hardened mediævalist exists. Even for those whom we call guilty, the vast majority being girls from 16–23 and boys from 18–25, is it common justice that their lives should be blasted for an early—often the first and only—act of ignorant, procacious folly? I defy any man who is conversant with such things to say that the punishment fits the crime. We need not condone the offence to stand aghast at its result. If, then, we admit the cure of venereal disease at all, it is our bounden duty, both in logic and morals, to press forward by all proper means, not only to the diminution of vice, but to the extirpation of disease.

But again the objection comes: If vice is made safe from disease, it will increase by leaps and bounds. This we believe to be pure fancy. Did vice decrease when the monstrosity of syphilis made its sudden and appalling invasion? Is there any reason to think that, if venereal diseases were destroyed to-day, there would be an increase of vice to-morrow? We believe not. Few, if any, people are restrained continuously from vice by fear of disease. Partly, no doubt, because they are ignorant of the facts; yet venereal affections are by no means unknown among advanced medical students. And if fear or knowledge could act as deterrents, both fear and knowledge are drowned in alcohol, the almost invariable companion of illicit sexuality. Fear of disease may act as a reinforcement of higher moral considerations, but can never become a substitute for them.

"Go and sin no more." The words may serve to recall to our minds the true principle. First cure, then reformation. The healing of disease is among the most powerful weapons in our moral armoury; conversely, it is true that persistent venereal disease is, specially for women, the most insidious enemy of moral reform. There are, we are told, in the United Kingdom 284 rescue homes for women. These do excellent work; but they do not deal with *diseased* women. Diseased women have little chance of reform, though it is only by bad luck that they are in a worse position than their more fortunate sisters. Disease and its stigma are too often the chain which binds women to the life of vice, while its cure will often restore the dormant self-respect. On these grounds we reject the view of disease as a wholesome moral corrective, not only as untrue, but as the exact reverse of truth. We have spoken at length on these two ideas—disease as retributive and fear as deterrent—because we believe them to be radical errors, plausible and popular, no doubt, yet errors; which unless removed will, like suckers on the rose, sap away vitality from the tree of effort and prevent it blossoming into vigorous action.

Agreed, then, that we must attack these diseases directly, not to the exclusion of, but in addition to, other means of moral improvement. How are we to set about it?

First of all, we must have accommodation. As regards beds for such patients as need them, the general hospitals cannot and do not, as a rule, take them in. The Lock Hospital in London has 136 beds for females, and 27 for males; other lock hospitals elsewhere have about 70—possibly 250 in all. This cannot even touch the fringe of our needs. And the charitable public will not subscribe to the cure of venereal illness; it must be done by the State. Certainly a large proportion can be treated, and even efficiently treated, as out-patients; but the general hospitals, which are best suited to this purpose, have no special accommodation or special arrangements, such as are imperatively required for properly dealing with these diseases.

Each general hospital, then, should have special wards, and special arrangements in the out-patient department. Since we wish to attract patients to their own cure, all treatment should be free to all patients, the expense being borne by the State. Suitable hours should be arranged so as to attract patients without the loss of a day's work. For this purpose also dispensaries should be provided with suitable apparatus. In all such places measures must be taken to ensure privacy, decency, and self-respect; in particular, privacy from other patients should be secured.

As regards the medical staff, there should be a special course in venereal diseases and their treatment, with a special certificate attached, which should be required for any such appointment. As in the army, so in the civil service, this would lead to the treatment of these ailments being both effectual for the patient and honourable for the doctor. Printed instructions, calculated not to disclose to others the nature of the disease, should be given and read aloud to each patient, so that he shall certainly understand them. Proper appliances should be at hand, so as to commence and teach the required treatment. The sanatoriums which are now in contemplation should have their use extended to venereal disease. Many cases require such treatment. These ailments are certainly not less important to the nation than tuberculosis.

Before leaving the question of hospital reform and extension, we ought to mention the cure for syphilis known as salvarsan, or "606," recently introduced by the genius and labour of Ehrlich. This, so far as our best information goes, is destined to play a leading part in the arrest of syphilis. It offers a definitive cure by means of

one, two, or three injections, but it has its limitations and its necessities. Limitations, in that cure becomes less certain, and less immediate, in proportion as the disease has by neglect got a stronger hold on its victim. In other words, the patient must come without delay for cure at the first sign of infection. (This holds equally true of gonorrhœa; though the methods are less specific, they are fairly certain to cure if undertaken early and vigorously.) Our necessity lies in the direction of accommodation. The new treatment involves intravenous injection, after which the patient has to be under supervision for at least one night. If every hospital had a special ward, this need would be met.[1]

But how shall we get the patients to come for early cure? The only way that I can see is to offer free treatment, respect of privacy, and efficient attendance. Some will ask, Why not place venereal diseases in the same category with other notifiable infections? This cannot be done to its full extent, inasmuch as these infections differ from others. No one is ashamed of having scarlet fever, small-pox, or typhoid, but here it is otherwise. Notification in the full sense—communication of name and address to the authorities, who in their turn see that the patient is treated—is not practicable. It would certainly lead to concealment by the patient, and would hardly even command the assent of the profession.

But notification without names we must have. It is the only way of finding out the strength of the enemy. We should then at once begin to know our position and be able to form an estimate of our progress. At present we are simply floundering. Notification of this sort would not frighten the patient away nor wound the doctor's conscience. It would give us no immediate hold over the patients, yet if it were found that a large proportion were not submitting to effectual treatment, some method might then be devised for enforcing it. But at the outset, until public opinion forms, we must set our faces against any scheme which would frighten away the very people whom we wish to attract. This idea of nameless notification is not a new one. It has been variously adopted in Denmark and Norway, in Vermont and California; a Bill to the same effect is introduced now in New Zealand. If these methods were adopted we should be on the way to fighting venereal disease effectually.

But this is not all. We have other enemies. Foremost is the quack, who has a vast *clientèle*. Treatment of venereal disease, actual or suspected, by any but a registered practitioner should be made a penal offence; all advertisements of cure should be rigorously suppressed. In venereal disease there is no place for fancy cures; they are every way to the public detriment.

That persons afflicted with venereal disease should come early for treatment, implies a certain knowledge and understanding on the part of the general public. Such understanding is, in this country, at a lamentably low level. Boys and girls grow to puberty in complete ignorance of the physical facts of life, of the functions which in their bodies are coming to maturity. During this stage, for both sexes, ignorance means misery; and while they do not care, from natural reserve, to consult their parents, the parents in turn are generally too ignorant, even when asked, to give the needed information. Later on, when forewarned would mean forearmed, as soon as blind sexual impulse drives to indiscretion, there follow, not only regret and remorse, leading back to virtue, but blighting disease which aggravates, not heals, the moral wound.

Boys and girls as they attain puberty must be taught the elements of reproductive activity in plants and animals, leading up to that of the human species. At every technical, secondary, and public school they should receive lectures from properly qualified persons. They must be taught that personal chastity has no disadvantage, either for the sexual organs or the body as a whole; that this alone will fit them to be good husbands, good fathers, good citizens. Similarly public lectures should be given in all towns, teaching the populace generally the value of chastity and the dangers of disease, striving to raise, not only intellectual standards, but also moral tone, and inculcating the imperative call for early treatment on the first suspicion of disease.

By these means both the prevention and cure of venereal ailments could soon come within reach. Many other means are suggested which for the time being do not command our approval. The raising of the age of consent, in itself a desirable thing, would probably quickly prove a dead letter. Others demand universal certificates of health before marriage; before this could be effected there would have to be a public demand for such legislation; at present we must depend on voluntary action. The parents of every girl should obtain thorough assurances that their future son-in-law is free from venereal disease; ignorance alone stands in the way of this most necessary precaution. Lastly, as regards compulsory detention in refractory cases, some means could be found at a later date of compassing this end; but at the outset it would have the double danger of being inoperative on the one hand, and of frightening away the patients on the other.

A summary.—From its character venereal disease is a danger to every nation in which it is prevalent. Gonorrhœa lowers the birth-rate, as well as brings disaster on its victims. Syphilis is a terrible and insidious disease, causing huge infantile mortality and ruining the lives of many of the survivors. In the army and navy its incidence is known, and enlightened and successful methods for its diminution are being pursued. As to the civil population we have no information and no policy. No policy, however, is better than a bad or immoral policy. We must in no case adopt State regulation, which is both unjustifiable in theory and futile in practice.

As to the magnitude of the problem, an estimate has been given you of 200,000 fresh cases annually for London and half a million for the United Kingdom. The meaning of this latter figure will take shape in your minds when you consider that if this number of persons were put shoulder to shoulder, two feet for each person, this wretched army would cover a length of 190 miles, or more than the distance from London to York.[2]

If we are to face this business we must treat the disease as disease; we must abandon outworn philosophies of divine retribution and fantastic fears that decrease of disease will spell increase of vice. Banish these false thoughts which kill enthusiasm. We must set about to cure these plagues, not, as at present, grudgingly and of necessity, but heartily and of set purpose.

To this end it is suggested that there should be reform in hospital accommodation, both in- and out-patient; that members of the special staff should have special training; treatment should be free to all and at convenient times, with adequate provision for up-to-date methods; public ignorance in these matters should be remedied by all possible means; the quack and all his works should be suppressed; and lastly, notification should be insisted on, without names indeed, but with a full account of age, sex, date of infection, duration of treatment, and result thereof. At first there would be an apparent increase in the number of patients, but this would soon give way to decrease, and with a decrease in disease there would be a decrease of vice.

The present time is favourable for the commencement of a campaign against venereal disorders. Gonorrhœa can be cured in its early stages, and its present incidence might be enormously diminished; against syphilis we have in our hands a specific, by means of which, rightly used, this disease might in a short time be eliminated. If full advantage were taken of these facts the economic and, as we think, the moral gain to the community, resulting from the diminution of disease, would quickly, amply, and repeatedly repay the cost of such an effort, for which the means are at hand and the time is ripe.

[1] On this whole subject see "Syphilis" by McIntosh and Fildes. Edw. Arnold, 1911

CASE OF RAPID INVOLUTION OF A UTERINE FIBROMYOMA AFTER PARTURITION.

BY REGINALD L. E. DOWNER M.B., B.S. LOND., M.R.C.S. ENG.

THE following case, showing, as it does, the total spontaneous disappearance of a fibromyoma of the uterus, is of some interest.

The patient, aged 25 years, was expecting her first child, and on the first occasion that I saw her was already in labour. The fœtus was in the first vertex position, but a somewhat puzzling tumour was present in addition, situated at the uppermost part of the fundus uteri, fairly mobile, hard, smooth, dull to percussion, of the size of a cricket ball, and

[2] The Hon. Sydney Holland will pardon a plagiarism.

suggesting at first sight some kind of monster or fœtal abnormality. Labour proceeded normally, however, and the patient was delivered of a healthy child. There was no post-partum hæmorrhage, and no difficulty with the after-birth. As soon as the uterus was empty, and contraction and retraction were well established, I was able to devote attention to the tumour, which retained all the characteristics previously noted.

As I saw the patient day by day, the uterus descended into the pelvis, and the puerperium was uneventful. The tumour sank with the uterus, and maintained its relative position thereto. It could be moved to a small extent over the uterus, and one could feel that it was attached to it by a short thick pedicle. Moreover, it steadily shrank, so that by the tenth day, when just above the symphysis pubis, it was no larger than a golf-ball. Ten days later it could be felt bimanually only, and was smaller still.

The patient was rather concerned about the presence of the swelling, which she herself had been able to feel during the early days of the puerperium, and which was a little tender on manipulation, but I reassured her, and promised to examine her again later. About two months after labour, therefore, I saw her. Nothing abnormal could be felt per abdomen. Per vaginam the uterus was anteverted, and the sound, with concavity forwards, passed 2¾ inches. Bimanually the uterus was felt to be a little thickened, but no tumour of any sort could be discovered. The patient was in excellent health and very relieved to hear that the swelling had departed.

I take it that the tumour I had originally discovered was a subserous pedunculated fibromyoma of the uterus. It was not composed of fæces, for it had not the consistency of these, and a fæcal tumour would hardly descend and shrink *pari passu* with the uterus. Another rare kind of swelling found in connexion with the uterus during labour (but easily and immediately excluded in the present case) is that due to the extrusion of a fœtal part after uterine rupture.

The condition as felt after the birth of the child suggested the signs that one might expect in that very rare condition hour-glass contraction of the uterus, but the persistence of the tumour after the birth of the placenta and the absence of post-partum hæmorrhage would have been sufficient to dispel such a notion, even had the condition during the earlier stages of labour not been observed.

One is forced to the conclusion, then, that a fibroid of the size of a cricket ball entirely disappeared in the course of two months during the process of involution. This, I imagine, is a very rare eventuality, but it does occasionally happen, and as Haultain[1] says, "This happy result is probably attained by firm uterine contractions impairing the blood-supply of the growth, and causing a degeneration of the muscle fibres analogous to that which occurs in the normal puerperal involution."

A year later the patient again became pregnant, and at the present time, gestation having proceeded for five months, there is no sign of any reappearance of the tumour.

Woking.

THE USE OF CALCIUM SALTS AS A PROPHYLACTIC AGAINST SERUM RASHES.

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IN the diphtheria ward at St. Thomas's Hospital it has been the custom during the last few years to administer calcium salts with the object of influencing the severity of antitoxin rashes. In order to ascertain the effect, if any, of this treatment, I took 62 consecutive cases and administered calcium to alternate ones, irrespective of the extent of membrane or dose of serum. The chloride was the salt used in most cases, but the lactate was given occasionally; the average dose was 5 gr. (maximum, 10 gr.; minimum, 3 gr.), given three times a day, omitting every third day. These doses may be considered small, but it must be pointed out that only 8 of the cases were more than 10 years of age. In each case rashes were carefully looked for, and, when present, noted as being "faint," "moderate," or "severe." Of these 62 cases, 12 died in less than 12 days after admission, and are therefore excluded. The results observed on the remaining 50 cases are tabulated below.

Age.	Total dose of serum.	Dose of calcium.	Rash.
4	5,000	10 gr.	None.
6	8,000	None.	,,
5	26,000	5 gr.	Moderate 17th and 18th days.
4	14,000	None.	Faint 7th day.
3	24,000	5 gr.	Faint 8th day.
3	18,000	None.	Faint 13th day.
7	8,000	5 gr.	Moderate 8th and 9th days.
1	28,000	,,	Severe 5th to 11th day.
3	12,000	None.	None.
2	16,000	,,	,,
25	16,000	10 gr.	Severe 9th and 10th days.
25	20,000	None.	None.
26	24,000	10 gr.	Severe 7th to 11th day.
5	26,000	None.	Severe 9th to 14th day.
2	20,000	5 gr.	Moderate 14th to 16th day.
5	26,000	None.	Faint 7th to 9th day.
13	12,000	8 gr.	Faint 9th to 11th day.
2	14,000	3 gr.	Faint 12th day.
4	12,000	None.	None.
6	20,000	8 gr.	,,
1	14,000	4 gr.	Severe 7th and 8th days.
2	6,000	None.	None.
2	6,000	5 gr.	Severe 6th and 11th day.
5	12,000	None.	None.
6	6,000	5 gr.	Faint 6th and 7th days.
1	6,000	None.	None.
4	6,000	5 gr.	,,
1	6,000	None.	,,
25	12,000	,,	Moderate 7th to 12th day.
3	24,000	5 gr.	Moderate 8th to 12th day.
4	2,000	None.	Faint 6th day.
6	20,000	,,	None.
5	2,000	,,	,,
6	2,000	,,	Faint 7th day.
3	2,000	,,	Faint 8th day.
1	20,000	4 gr.	Severe 8th to 11th day.
1	2,000	None.	None.
5	8,000	5 gr.	Moderate 7th and 8th days.
19	12,000	None.	None.
10	14,000	5 gr.	,,
2	22,000	,,	Severe 12th to 14th day.
2	2,000	None.	Faint 4th to 6th day.
22	16,000	,,	None.
5	20,000	,,	,,
1	8,000	3 gr.	Severe 8th to 11th day.
7	12,000	None.	Severe 6th to 14th day.
5	12,000	,,	Severe 6th to 14th day.
4	26,000	5 gr.	Faint 7th to 9th day.
5	20,000	,,	Faint 8th day.
1	8,000	3 gr.	Severe 8th to 11th day.

The above table may be summarised as follows:—

—	Average dose of antitoxin.	No rash.	Faint rash.	Moderate rash.	Severe rash.	Average duration of rash when present.
23 cases treated *with* calcium ...	16,000	4	6	5	8	8·4 days.
27 cases treated *without* calcium	11,000	16	7	1	3	3 days.

Calcium chloride is a nauseating drug and it is difficult to persuade children to take it; further perseverance in this direction would seem to be unnecessary if the above figures are to be trusted. I am indebted to the physicians of St. Thomas's Hospital for permission to publish these figures.

Queen Anne-street, W.

[1] Allbutt, Playfair, and Eden: System of Gynæcology.

A DIPLOCOCCUS FROM THE URINO-GENITAL TRACT.

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THE organism we describe in this communication is one which is not infrequently met with in the urino-genital tract, yet appears to have escaped notice in the standard works on bacteriology. It is a diplococcus in no way allied to the pneumococcus, yet the two organisms may be, and indeed have been, confused.

Distribution.—We have isolated the organism from the urine of women, children, and much less commonly male adults, as well as from the vagina, and we have obtained pure cultures of it from pus from the interior of the uterus. It appears to be particularly common in the urine of small children; in an examination of carefully taken catheter specimens from 11 children with epidemic diarrhœa we met with it in 8 cases.

Morphology.—The organism appears in films from the tissues as a diplococcus. It may be present in the pus in enormous numbers, and is readily taken up by the leucocytes. In broth media it is found in pairs and short chains. Lanceolate and bacillary forms are very common both in solid and liquid media. The organism retains the stain by Gram's method. Neither in the tissues nor in cultures have we seen any appearance of a capsule.

Cultural characters.—Serum agar, agar slopes, and agar plates gave translucent pin-point colonies of the streptococcal type. The colonies are frequently somewhat coarser in the first cultures on agar plates, the subcultures yielding a profuse growth of very delicate colonies. Gelatin slope gives a profuse growth without liquefaction. Broth yields a general turbidity. Litmus milk is turned acid and completely decolourised in 24 hours, while we have observed this change to occur in six hours. A solid clot is generally formed in about three days. The complete and rapid decolourisation of litmus milk is the most noticeable and constant cultural characteristic. Neutral red broth is unaltered by some strains, while others produce a green fluorescence. Litmus salicin, dextrose, lactose, mannite, maltose, and saccharose are all acidified in from 24 to 48 hours. Litmus raffinose remains neutral for 24 hours, but as a rule becomes decolourised later. His's serum inulin medium is unaltered, but the organism grows well in it. The coccus grows abundantly on subculture, on all the ordinary media, and retains its vitality. An agar culture kept at the laboratory room temperature for three months grew readily on subculture and gave all its original cultural characters.

Pathogenicity.—The organism may be present in the urine without other evidence of disease. In one case it was obtained in pure culture from the urine of a man, aged 25, with a pyonephrosis and abundant pus in the urine. In another case it was the sole organism found in the persistent cervical discharge of a woman suffering from peritonitis who recovered without surgical interference after treatment by a vaccine prepared from the coccus.[1] The agglutination test performed with the sera of two patients from whom the organism was isolated was in both instances negative.

The following inoculations were made into animals. A suspension of 3 c.c. of normal saline solution was made from an agar culture. Of this 0·5 c.c. was injected intraperitoneally into each of two mice. One mouse became ill and was killed in 24 hours, the other died suddenly ten days later. No evidence of disease was found in either animal, but the organism was recovered from both in pure culture from the blood stream and from the peritoneum. Two c.c. of the same suspension were injected into the vein of a rabbit and no effect was produced. A third mouse was inoculated with the organism recovered from the first mouse without ill-effect; it was killed four weeks later, but the coccus could not be recovered from the tissues.

Remarks.—In its staining properties, its morphological appearances, and in the nature of its colonies on agar this organism closely resembles the pneumococcus, yet in every other respect the two bacteria are widely different. It should hardly be necessary to insist that the diagnosis of a pneumococcal infection can only be made after full cultural and other investigations, yet we venture to think that the frequency with which the pneumococcus has been reported from the urine and from vaginal discharges depends upon the mistaken identity of that organism with the one we have described; in fact, we have evidence that this mistake does occur. The organism is one not infrequently met with, and may be unaccompanied by any evidence of disease. In a certain proportion of cases, however, it is associated with the ordinary phenomena of inflammation and may be the sole organism detected. The coccus appears to have little or no pathogenic action on mice or rabbits.

[1] The husband of this patient suffered from a urethral discharge, but examination was avoided, possibly unwisely, a bacteriological examination

SPLENOMEGALIC POLYCYTHÆMIA WITH CYANOSIS.

(OSLER'S DISEASE OR MALADIE DE VAQUEZ.)

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A CASE of this extremely rare disease is worthy of record.

In March of this year I was called to attend a patient aged 56; he was stated to be suffering from "a cold on the chest." At first sight the thing that at once struck one was the patient's extreme cyanosis. The lips and ears in particular were nearly black, and the whole countenance was livid. The patient was seated comfortably in a chair, and instinctively one felt, without being able, perhaps, to trace the steps of the mental process, that one was face to face with something that did not "fit in" with any ordinary condition.

The respirations and general demeanour of the patient at once put out of court any suggestion of acute respiratory or cardiac trouble. The cyanosis was not the distinctive colour of that of congenital heart disease, which, so far as I know, is simulated by no other pathological condition. Advanced emphysema, although we know it may be accompanied by extreme cyanosis and comparative comfort, was negatived by the obvious absence of anything approaching an emphysematous shaped chest. One could see at a glance that there was no clubbing of the fingers.

The patient's immediate history was unimportant. He resided on the south coast, and had been in town for two or three weeks' change. Some days before he had caught a cold which had settled on his chest. He was spitting up some mucus. His past history was as follows. For many years he has suffered from migraine. The attacks were very severe and prostrated him for two days at a time. Fifteen years ago he had some œdema of one ankle and leg, and consulted Dr. Frederick Taylor for that and the migraine. Dr. Taylor told him that he was sound organically, and under treatment the œdema disappeared and he derived marked benefit so far as the migraine was concerned. About nine years ago he consulted the late Dr. J. F. Payne, who corroborated what Dr. Taylor had said. Some two or three years later he again saw Dr. Taylor, who examined him and pronounced him free from organic disease. Up to six or seven years ago, then, we are justified in assuming that the present disease had not manifested itself.

About four years ago he had a sudden attack of vertigo and lost consciousness for about one minute. At intervals since he had occasionally felt giddy, but had never again "lost himself." For several years his friends have been remarking that he was getting "a better colour," having previously been pale in complexion. His life has been regular and his habits abstemious. He does not smoke. Beyond coughs and colds occasionally, he has had no other illnesses, and up to the time of my seeing him had not the remotest idea that anything was wrong. To slight dyspnœa on exertion and to constipation he paid no attention. The patient had never been abroad.

On examination there was general cyanosis, most marked in the ears and under mucous membranes. The gums, tongue, pharynx, and inside of the mouth generally were of a deep purple colour. The gums bled with extreme ease,

and when the patient coughed a little blood came with the expectoration, but was not really mixed with it, and obviously emanated from the pharynx. The conjunctivæ were deeply injected.

Chest.—Lungs normal. There was no emphysema, which must be emphasised in view of the nature of the case. A few coarse rhonchi were heard, but beyond this nothing abnormal.

Heart.—The upper limit of dulness was at the third rib. To the right it did not encroach beyond the right edge of the sternum. The apex beat was in the fourth space just internal to the nipple line. The dulness extended beyond the region of the apex and was of great extent, passing out to the mid-axillary line. In view of the position of the beat being in the fourth space and internal to the nipple line the suggestion was that the heart was pushed up from below, and that the dulness beyond the nipple was caused by some organ other than the heart. A soft systolic murmur was heard at the apex, but there were no symptoms arising from it.

Abdomen.—Having found nothing in the chest to account for the cyanosis, one next examined the abdomen. The right side was flaccid and nothing abnormal was felt, but the left side was very rigid apparently. This rigidity was soon proved to be due, not to the muscles, but to an enormously enlarged spleen which extended forwards to the middle line, backwards into the flank as far as the posterior axillary line, and downwards nearly to the pubes. The notches could easily be felt. There was no tenderness, and the surface was smooth, firm, and unyielding. The edge was quite hard and sharply defined. The patient had not the remotest idea that there was anything abnormal about his abdomen.

This cleared the ground considerably. It was obvious that the symptoms and physical signs were not satisfactorily accounted for by one disease. The patient had a chronic disease, almost certainly intimately connected with the spleen, and the cough and cold were an independent and transitory affection in no way related to the cyanosis.

Nervous system.—There was no evidence of organic disease. The knee-jerks, plantar reflexes, &c., were normal. No anæsthesia existed.

Circulatory system.—The radial was slightly thickened, but not beyond the limit of health for a man of the patient's age. The blood pressure was 140–160 mm. Hg. The flow of blood was sluggish, the viscosity being increased.

The urine contained a faint trace of albumin.

Blood examination.—This was carried out on two occasions, the second being used as a check on the first. The two reports were substantially the same: hæmoglobin, 110 per cent; red blood cells, 8,500,000 per c.mm., or 170 per cent.; color index, 110/170—0·6; white blood corpuscles, 20,000 per c.mm. The red cells were moderately regular in size and shape, the average diameter being about 8μ, and poikilocytes not being seen. The stain was moderately well retained by the cells, while abnormal staining and nucleated forms were not seen.

A differential count of white corpuscles gave the following results: polymorphonuclear neutrophiles, 92 per cent., or 18,400 per c.mm.; small lymphocytes, 6 per cent., or 1200 per c.mm.; large lymphocytes, 1·2 per cent., or 240 per c.mm.; eosinophiles, 0·8 per cent., or 160 per c.mm. Mast cells and myelocytes were not seen.

There was thus evidence of a polycythæmia with marked polymorphonuclear leucocytosis, accompanied by great enlargement of the spleen and marked cyanosis.

I had never before seen a case, and explaining the ascertained facts to the patient I suggested that we should have a consultant to see him before he returned home. He agreed, and Dr. Herbert Hawkins visited him. I explained to Dr. Hawkins exactly what I had found on examining the patient, and directly I showed him the blood report he expressed his opinion that the clinical and microscopical examinations supported each other, and he identified the disease as Osler's splenomegalic polycythæmia with cyanosis. His subsequent examination of the patient confirmed his view. Dr. Hawkins had seen two cases, one of which was under his care and the other under Dr. T. D. Acland. Concerning treatment, he had found systematic bleeding unsatisfactory, and as the patient would be returning home as soon as his temporary trouble was over, it did not appear to be worth the trial. I had been giving the patient iodide, and Dr. Hawkins suggested his taking it in the form of iodalbin, gr. v. t.d.s., for a month at a time with a week's intermission.

About ten days later the patient was able to return home. I heard from him at intervals. He was keeping well, carrying out instructions as regards food, drink, exercise, &c., and had had only one attack of migraine since March. I went down to see him in September and found that his health was good. The cyanosis was not so marked. The spleen was, if anything, *slightly* smaller, but there was no marked alteration in size. The cardiac condition was quite satisfactory. The murmur was giving rise to no symptoms. Any evidence of hypertrophy was extremely slight. The difficulty of accurately percussing out the cardiac dulness of course remained. *The lungs were perfectly normal.* I saw him again in October. His condition was still the same.

The condition is one of great interest. Unfortunately, treatment is of very doubtful benefit. The patients may go on comfortably for a number of years apparently, but the termination seems to be pretty certainly cerebral hæmorrhage. With regard to venesection, it would appear rational to try its effect should the blood pressure become dangerously high or the attacks of temporary unconsciousness frequent. I venture to suggest that this treatment would be likely to prove of more avail than the exhibition of nitroglycerin and its allies, *especially in cases unaccompanied by arterio-sclerosis.*

For the diagnosis of the disease Sir William Osler requires chronic cyanosis, polycythæmia, and enlargement of the spleen, and the absence of advanced emphysema and chronic heart disease. I believe that in all his cases included under the heading of this disease emphysema and chronic heart trouble were absent. A little discrimination is required here, however, because I believe it is a fact that as the disease (polycythæmia) progresses unequivocal and very serious cardiac lesions develop. A case might be rejected because of chronic heart trouble, while really the cardiac condition was the result of the blood disease. In an early case with a mitral systolic murmur, is the bruit of a hæmic nature?

With regard to the pathology of the disease, it appears to be pretty clear from the presence of normoblasts and megaloblasts that there is an active production of erythrocytes, and "some of the few post-mortems have demonstrated increase of the marrow, and one at least has confirmed Widal's view that the splenic enlargement is due to the resumption by the spleen of its fœtal property of production of erythroblasts" (Adami's "Principles of Pathology"). Dr. Parkes Weber says it is due to an "increased erythroblastic activity, involving a great part, but not necessarily, the whole, of the bone marrow." At any rate, what is *unknown* is the stimulus that stirs the bone marrow into increased activity.

The argument that the disease is due to diminished destruction of red cells seems to be generally regarded as a slender one. Large collections of disintegrated red cells have been found in splenic pulp, and in eight cases urobilin in the urine in sufficient quantities to suggest an excessive breaking down. The argument that the spleen fails in its function of destroying red cells consequently does not hold good. On the other hand, the evidence in favour of an increased formation of red cells is considerable and direct. In fact, "in every case of the disease in which the bone marrow has been examined microscopically it has been found that the yellow marrow, normally found in the long bones, has been transformed into red marrow relatively free from fat and showing active formation of red cells" (Mackey). Vaquez says that in every case of a true polycythæmia there is increased formation of red corpuscles, associated with continuous and frequently progressive increase of number in the circulating blood.

In a synopsis, by Dr. L. G. J. Mackey, of just over 40 recorded cases there are admittedly a considerable number that do not fulfil the required conditions which would justify their inclusion. Apart altogether from the many cases of *relative* polycythæmia from various causes, there are undoubtedly many cases of true polycythæmia from congenital heart disease, acquired valvular disease, especially mitral stenosis, adherent pericardium, &c., which may not be included under the heading of Osler's or Vaquez's disease. There must be (to repeat) true polycythemia, with enlarged spleen and cyanosis, in the absence of emphysema and chronic cardiac conditions. That there is such a condition is proved by the cases collected by Sir William Osler and others, each of

which, few though they be, conforms to the requirements laid down.

Clapham Park, S.W.

OVARIAN CYSTOMA OF UNUSUAL SIZE COMPLICATED WITH VENTRAL HERNIA AND ASCITES.[1]

BY H. MACNAUGHTON-JONES, M.D. Q.U.I., M.A.O., F.R.C.S. IREL. & EDIN.

THE following is a note of an ovarian cystoma of unusual size; it was the largest tumour of its kind I have ever seen. Possibly some of those present will have dealt with larger, and in patients of still more advanced age. I was indebted to Dr. W. C. Dowling Prendergast, of Hanley, for the opportunity of seeing the patient and for this short history of her condition antecedent to operation.

Age 67; married; no children; first noticed a swelling in the abdomen 12 years ago; has been under his care for 11 years (I may here interpolate that the patient determinedly refused to take the advice repeatedly given to submit to operation); has worn an abdominal belt for some years for a ventral hernia, and some four years since this latter increased in size and became very prominent. Her general health was fairly good; the bowels kept regular. The immediate cause of her submission to an operation was the huge size of the abdominal swelling, which prevented all attempt at locomotion. "The walls over the umbilical hernia were thinned to such an extent [Dr. Prendergast also says in his report] that he feared rupture of the abdominal wall."

The condition of the patient immediately before operation, when I first saw her in her own house, for she could not be removed, was not an inviting one, and I dreaded even her removal into an adjacent room prepared for the operation. She was under the influence of scopolamine-morphia which had been administered on the previous night and again that morning, and an injection of strychnine and atropine had been given an hour before. The anæsthetic was most skilfully administered by Mr. A. P. Square. The girth of the abdomen in the prone position by careful measurement at its greatest circumference was 57½ inches. The abdominal muscles for a considerable extent had separated and the wall was thinned out with a diffused rupture which included an area of several inches in circumference above the umbilicus.

The peritoneum was firmly attached in front to the sac of the cyst, and both, for some extent, were adherent to the abdominal wall. In detaching the peritoneum before puncture from the wall of the sac a quantity of ascitic fluid escaped. Dreading the effect on the anæsthesia through the sudden relief of pressure, the abdominal wall at either side was held well up and the remaining ascitic fluid very slowly drained off. The rest of the operation was simple. The huge cyst was emptied and removed, and the patient was in a good condition when placed in bed.

The operation was performed on April 21st, and on May 3rd Dr. Prendergast reported the patient as "full of life and spirits," and a fortnight afterwards she was in her garden daily. On Oct. 27th last he saw her, when she was "well and able to do her shopping."

Harley-street, W.

[1] A note read at a meeting of the Obstetrical and Gynæcological Section of the Royal Society of Medicine on Nov. 3rd, 1911.

LIVINGSTONE COLLEGE.—The annual report and statement of accounts of this college shows a decline in the number of students attending the college, with the result that there is now a financial deficiency of £500. It is hoped that this debt will be speedily removed, and that the result of the Livingstone Centenary Fund in connexion with the centenary of the birth of Dr. Livingstone, which will occur in 1913, will place the college in a better position. Twenty-seven students entered for not less than one term during the year. The report makes reference to the appointment of a board of missionary study, as a result of the World Missionary Conference held in Edinburgh last year, which it is hoped will lead to greater attention being devoted among other things to the necessity of elementary medical training for missionaries.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Dec. 8th, with Sir WILLIAM OSLER in the chair.

Mr. HERBERT TILLEY showed four cases illustrating surgical treatment of Chronic Empyema of the Nasal Accessory Sinuses. Case 1 was a male, aged 71, who sought relief for double vision, and complained of no other symptoms. A small, tense swelling was observed between the right eyeball and the inner half of the "orbital arch." There was distinct proptosis of the eye. Examination of the nasal cavities revealed a free discharge of pus from all the sinuses on the right side. At the operation an incision was made immediately below the right eyebrow and along its whole length, and terminating just above the internal canthus. The swelling above referred to was found to be part of the wall of the frontal sinus empyema, which by destroying the roof of the orbit had forced its way anteriorly. The anterior wall of the sinus was completely removed, when it was found that the whole posterior wall of the sinus had been destroyed, exposing a large area of dura mater, while the floor of the sinus consisted of the contents of the orbit. The right maxillary antrum, ethmoid, and sphenoid sinuses contained pus, and were freely drained by the usual surgical methods adopted for these bony cavities. The patient made an excellent recovery, with very slight deformity. The curious feature of the case was that in spite of the extensive destruction of the bony walls of the frontal sinus, he never suffered from headache, or complained of any purulent nasal discharge. His one trouble was "seeing double." The second case was a female, aged 30, admitted to University College Hospital in July, 1911, for inflammation of the "right eye and face" of five weeks' duration. On admission there were intense inflammation and swelling of the right side of the face, extending from the frontal eminence to the level of the right angle of the mouth. The right eye was proptosed and the globe hidden by swollen, œdematous, everted conjunctivæ. The upper eyelid was swollen, œdematous, and of a purple colour, and just below the inner angle of the eyebrow was a pus-discharging fistula leading backwards to the posterior and inner region of the orbit. A purulent discharge was seen in the right nostril and in the naso-pharynx. The temperature was 102° F. The mental condition was obtuse. The patient looked very ill. An operation similar to that in Case 1 was carried out immediately. A large collection of pus was opened on the inner side of the orbit and sequestrum removed from the posterior ethmoidal cell region. The antrum was opened in the canine fossa and found to be full of caseated pus; the inner antral wall was removed to provide for free and permanent drainage. The patient's recovery was retarded by symptoms of pleurisy, which eventually cleared up. Only slight deformity was to be noted in the region of the frontal sinus, in spite of free removal of all its anterior wall. The third case was that of a female, aged 13, who was admitted to University College Hospital for acute swelling and œdema of the left upper eyelid and lower frontal region. The temperature was 102° F. She had some headache and malaise. There was no discharge of pus from the left nostril and none to be seen in the left nasal cavity. The same operation was carried out as in Cases 1 and 2. About a drachm of pus was found between the eyeball and the lateral mass of ethmoidal cells. The frontal sinus also contained pus and was freely opened and drained. Rapid recovery took place, with little deformity. The condition was uncommon in children. The fourth case was a male, aged 60, whose left frontal sinus was opened from the outside because of severe headache associated with empyema of that sinus and the corresponding antrum. Killian's operation was performed—i.e., the anterior wall and floor of the sinus were removed, with the exception of that portion of the orbital arch which formed the junction of the wall and floor of the sinus. By leaving that bridge of bone very little deformity resulted, as was seen in that case.

Mr. H. MORRISTON DAVIES showed a case of long-standing Dislocation of the Patella (? traumatic) and Osteo-arthritis of the Knee-joint treated by operation 18 months ago. The patient was a widow aged 55. Forty-eight years ago she fell down and dislocated her right patella. Since then the patella had remained on the outer side of the knee. There was no history of poliomyelitis, and the electrical reactions did not suggest that the original dislocation was due to paralysis. Thirty years ago the patient began to be troubled with pain in the right knee, and ten years ago she was unable to stand or walk without the aid of a special splint and crutches. At the time of her admission to hospital in May, 1910, there was considerable genu valgum of both legs; the right patella was lying to the outer side of the joint with the anterior surface looking directly outwards. The condyles of the femur were easily palpated and marked osteo-arthritic changes could be recognised. With the leg fully extended it was possible only partially to replace the patella. The patient was unable to lift the limb off the bed or to extend it against resistance. There was considerable wasting of the quadriceps femoris, and especially of the vastus internus; the knee-jerk, however, was obtainable. The main steps in the operation, which was performed on May 27th, 1910, were:—1. The opening of the knee-joint and the removal of a large part of the anterior and inferior surfaces of the external condyle, so as to allow the patella to ride over the lower end of the femur when the joint was flexed. 2. The division of the extension of the quadriceps femoris on the outer side. 3. The freeing of tendons of the gracilis and semi-tendinosus muscles from their insertions in the tibia, and the stitching of the cut ends of those to the inner side of the patella. The tendons were passed under the sartorius and enclosed in folds of the capsule. 4. The longitudinal pleating of the capsule so as to tighten it on the inner side of the joint. Massage and passive movements were begun on the fourth day, but a fortnight later adhesions in the joint had to be broken down. On June 20th the patient could flex the knee to a right angle and could lift the leg off the bed. She left the hospital wearing only a bandage as support. The patient celebrated the first anniversary of her operation by going to a dance and dancing hard. She can now run up and down stairs and work all day long without pain or undue fatigue. The actual result from a cosmetic point of view might be still further improved by curing the genu valgum, but considering the patient's age and the satisfactoriness of the limb there was no indication for the further operation.

Mr. HENRY CURTIS showed a case of Acute Periostitis of Rib, with separation of sequestra (non-tuberculous, non-traumatic). The comparative rarity of the condition seemed to justify the record of the case. The patient, a Hebrew boy, aged 14, was admitted to hospital on March 31st, 1911, for pain in the chest. He first complained of pain over the heart, compared with the "sticking of needles," on the previous Monday, and it became steadily worse. On admission the facial expression was anxious, with a hectic flush on the cheeks, furred tongue; temperature 102·5° F., pulse 112, respiration 28. There was no constipation. The right chest, front and lower axilla, were fuller than the left, and slight but distinct œdema was observed, with widely diffused marked tenderness, which extended well over the contiguous upper abdomen, in the right hepatic region, where there was considerable rigidity. There was some loss of note over the right front below, but no abnormal breath sounds. There was a leucocytosis of over 20,000. A diagnosis of empyema or acute abdominal suppuration—e.g., subphrenic abscess—were possibilities, but exploration of the chest negatived empyema; a second needle puncture struck what appeared to be bare rib, evacuating pus. Following the needle down by an oblique incision downwards and forwards along the line of the fifth right rib pus was found welling out in large quantities from beneath detached, thickened, congested periosteum, between it and the rib. Free drainage was effected above and below. The wounds closed by May 17th, but two sequestra were removed on Sept. 19th, one from the upper one in the anterior axillary line, the second from the anterior wound in the parasternal line; the third, and largest, sequestrum was removed from the lower wound on Nov. 11th, both incisions now being soundly healed. The pathologist's report negatived tubercle, a pure culture of staphylococcus pyogenes aureus being obtained.

Mr. E. M. CORNER and Dr. L. GRANT showed a case of Healed Double Empyema in a male patient, aged 29, who was admitted with both pleural cavities containing pus to the Passmore Edwards Hospital, Wood Green, under the care of Dr. Grant, on Sept. 11th last. A rib was resected on the right side, as that side contained most fluid; three pints were withdrawn. On the next day (the 12th) 1 pint of pus was withdrawn by aspiration from the left side, and on the 13th a rib was resected on that side. The left side healed and closed in 11 weeks, the right side in about 10½ weeks. Since then the man had made steady progress, adding 3 lb. to his weight the week previous to the last time he was seen. His heart was still displaced and the pulse-rate was still rapid.

Mr. R. P. ROWLANDS showed a case of Anterior Gastro-jejunostomy, Perforated Jejunal Ulcer, Detachment of Jejunum, Excision of Ulcer, Gastro-duodenostomy. The patient was a man aged 30. In June, 1905, anterior gastro-enterostomy was performed elsewhere for pyloric obstruction. He had had complete relief for four and a half years. Then he had pain in the abdomen to the left of the navel, partly relieved by food. The patient became wasted and for three weeks before perforation the pain was unusually severe. On Sept. 2nd, 1910, at 6 30 P.M., during micturition, suddenly he felt a terrible burning and sharp, aching pain running downwards from the navel to the pubes. The pain was not relieved by morphia. The patient was admitted to Guy's Hospital seven hours after perforation and the abdomen was opened half an hour later. A large amount of sero-purulent sanious fluid and gas escaped. The pelvis, both flanks, and the subdiaphragmatic space on both sides were full of sero-purulent liquid. Anterior gastro-jejunostomy without entero-anastomosis was found; the proximal limb of the jejunum was greatly dilated and hypertrophied. There were dense adhesions between its gastric end and the parietes, indicating old perforation. A large perforation was found in the distal limb 1 inch below the gastro-jejunal opening. The latter was only three-quarters of an inch in diameter. The perforation was closed, the abdomen washed out, and a tube inserted at the lower angle of the wound. The patient did well while in hospital, but soon afterwards symptoms returned in spite of continued medical treatment. He was readmitted once for prolonged medical treatment. He improved a great deal, but had not been out many days before the old pain and vomiting returned. There was burning pain and a feeling of bursting. At the operation in May, 1911, the jejunal ulcer was found adherent to the liver, detached, and thus opened. The pylorus was almost occluded and adherent high up and far back. The jejunum was then detached from the stomach. There was ulceration round the stomach. The jejunal ulcer was excised. The large jejunal wound was closed transversely without narrowing of the lumen. The gastric wound was enlarged up and to the right, and joined to a similar opening made in front of the first and second part of mobilised duodenum. The symptoms had abated. The patient had gained weight, although at work for several months.

Mr. ROWLANDS also showed a case of Gastric Carcinoma; partial gastrectomy two years ago. The patient was a male aged 51. He had had gastric symptoms for four months: vomiting, anorexia, indigestion, constipation, chronic hæmatemesis and melæna, very severe anæmia, and wasting; he had lost 22 lb. in 15 days. An operation was performed in November, 1909, when extensive, but not complete, gastrectomy was done, the duodenum was closed, and gastro-jejunostomy performed. The patient was now quite well and working. At first he could only take small meals; the small remainder of stomach had dilated.

Mr. C. GORDON WATSON showed a case of Excision of a Large Myeloid Sarcoma of the Ischium. The patient was a male aged 51. He had been operated on 12 years ago at St. Mark's Hospital for ischio-rectal abscess. On June 17th, 1911, he was admitted to St. Mark's Hospital complaining of "return of the abscess." On examination there was an elastic swelling bulging into the ischio-rectal fossa, the rectum, and adductor region of the thigh. The tumour was about the size of a cocoanut, was fixed to the pelvis and deep to the thigh muscles, which were wasted. Marked egg-shell crackling was obtained on firm pressure all over the tumour. X ray examination showed that the tumour had a bony shell and was attached to the ischium and pubes. An exploratory incision, followed by microscopic examination, proved the tumour to be a myeloma. On July 7th

he had an operation at the Metropolitan Hospital, when ligature of the internal iliac artery was done. On July 10th the tumour was excised with the patient in the lithotomy position. The greater part of the ramus of the ischium, the tuberosity, and the descending ramus of the pubes were removed with the tumour. The adductors were very adherent to the tumour, and were divided, together with the hamstrings. The sciatic nerve passed over the surface of the tumour, but was not injured. The internal pudic artery was ligatured. A portion of the right crus of the penis was removed. The hæmorrhage was not serious. The tumour was composed of soft vascular tissue, with a thin, bony shell, and consisted of giant cells. The recovery was good; the patient had good use of all his thigh muscles and walked well without pain.

Mr. P. TURNER and Dr. C. E. IREDELL showed two cases of Rodent Ulcer treated by fulguration. The first case was that of a male, aged 56, who was admitted to Guy's Hospital on May 29th, 1910, for a large rodent ulcer which had perforated the right cheek from the anterior border of the masseter to the angle of the mouth, and had also invaded the muco-periosteum of both the superior and the inferior maxillæ. The disease appeared 19 years before in the form of a pimple which did not give rise to any trouble until five years ago, when it began to ulcerate. In 1907 he had X ray treatment under which the ulcer cicatrised. About a year before admission the scar broke down and the ulceration rapidly extended. Radium and X ray treatment were tried for six months, but without benefit. On June 2nd chloroform was administered and the ulcer curetted and scraped, when a large backward extension deep to the masseter and involving the mucous membrane of the cheek was found. When the ulcer had been thoroughly scraped the resulting raw surface was cauterised by the use of the high-frequency current (diathermy). After 10 days a number of superficial sloughs separated, leaving a healthy granulating surface. A sequestrum also separated from the superior maxilla, leaving a large opening into the antrum. The ulcer completely cicatrised in about three months. The obturator for the gap in the cheek was suggested and designed by Mr. F. J. Pearce, assistant dental surgeon to Guy's Hospital. The second case was that of a male, aged 57, who came under observation in 1908. In 1896 the patient noticed a small sore on the left cheek, about half an inch from the ala of the nose. In 1898 it was excised, and recurred two years later. It was then scraped, and later cauterised on several different occasions. In 1902 X ray treatment was started, and he had several hundred treatments. When first seen he had an ulcer about an inch in diameter on the left cheek, equidistant from the left side of the nose, eye, and lip. He was treated with 22½ mg. of radium, having upwards of 50 applications of 36 hours each during the three succeeding years. A piece of lead 1 mm. thick was placed between the radium and the patient. He also had three treatments with carbon-dioxide snow. In October, 1910, the ulcer, which had never healed up, seemed to grow more rapidly, and in January, 1911, he was seen by a surgeon, who suggested removing the whole of the superior maxilla. At that time the lip was becoming involved and also the ala of the nose. The patient refused the operation suggested and was seen again in May. The left upper lip was then destroyed and a good deal of the left side of the nose. The ulceration had also spread on to the left malar bone. The patient was anæsthetised and the edges of the ulcer were cauterised by the method of using high frequency known as diathermy. The right eye being blind, the patient was most anxious that no harm should be done to the left eye, and therefore the part of the ulcer near the inner canthus was left untreated. Since the operation there had been no spread of the ulcer except towards the eye. The patient was shown as an example of treatment by diathermy.

Mr. V. ZACHARY COPE showed a case of Achondroplasia in a male, aged 9, who was about the size of a child of 5. He was intelligent for his age. The stunted growth was noted since he was about 2 years old. All his limbs were much shorter than normal, and the long bones exhibited marked enlargements in the region of the epiphysis, which radiography showed to be due mainly to thickening and irregular ossification of the end of the diaphyses. There were no curves like those of rickets. The fingers and toes were short and thick. The vault of the skull was well developed; the base rather smaller than normal. There was very slight bending of the ribs. The head of the fibula was higher than normal on both sides and took part in the knee-joint on one side. Three brothers and two sisters were well developed. The boy was the youngest child; the mother was aged 41 at his birth. She had a marked enlargement of the right lobe of the thyroid, which had been present as long as she could remember. The case was suggestive of a relation between achondroplasia and derangement of the thyroid.

Mr. W. G. SPENCER showed a case of Congenital Specific Stenosis of the Fauces and Pharynx in a young woman who showed persistent nodes and a gummatous scar on the scalp. In June she was admitted under Mr. Arthur Evans for severe ulceration of the fauces and pharynx. Tracheotomy was done and salvarsan administered, after which the ulceration rapidly healed, resulting in stenosis. Mr. Evans then performed a plastic operation upon the soft palate and fauces; the tracheotomy tube was then left out, and the patient was discharged on August 19th, breathing and swallowing well. On Oct. 15th she was readmitted under Mr. Spencer with dyspnœa, hardly able to swallow fluids. After reintroducing the tracheotomy tube it was found that the naso-pharynx would allow of the passage of only a very small catheter, whilst a No. 10 passed with difficulty through the fauces and pharynx. On gently dilating to admit a finger the fauces and pharynx, down to the larynx, were found to be changed into a very dense ring in which the vessels of the neck had become involved. Therefore a No. 10 œsophageal tube was passed through the left nostril down the pharynx, through which the patient was at first fed, but soon she swallowed beside it. Later, a full-sized œsophageal cannula was passed, beside which the patient could now swallow ordinary hospital diet, and had rapidly put on flesh. She could herself take out the tube when she went out of doors, and put it back before a meal. For the present, therefore, the necessity for gastrostomy had been avoided. The tracheotomy tube would be required permanently. The very dense and extensive fibrosis which had followed the rapid healing of the ulceration after salvarsan was a disappointment.

Mr. V. WARREN LOW showed a case of Multiple Melanotic Sarcomata of the Skin, possibly secondary to a melanotic sarcoma of the skin removed 18 months ago. The patient was a woman, aged 34, who had always had a mole on the inner side of the left leg below the knee. Three years ago this was knocked off and bled and a scab formed. When that either fell off or was removed a raw, bleeding surface remained. Gradually a dark, reddish swelling began to form. The patient was first seen in April, 1910, when the tumour had reached the size of a pigeon's egg. It was pigmented and presented a raw surface covered by a scab. There were also several small, pedunculated, and pigmented tumours attached to the skin on the left thigh. The left femoral glands were enlarged. On April 11th, 1910, the tumour was excised with a wide area of skin around. The femoral glands were also removed and the three pedunculated moles on the left thigh. The material excised was examined microscopically by Mr. E. H. Shaw. The main growth proved to be a melanotic sarcoma; the glands contained secondary deposits similar in character to the growth. The pedunculated tumours showed the ordinary character of simple moles. In January, 1911, the woman again came to the hospital with some small nodules in the scar of the old wound; these were removed and microscopically showed the same characters as the original growth. Shortly afterwards a number of small superficial pigmented tumours began to make their appearance on the left leg below the knee, and this occurrence still continues. At first these made their appearance as small reddish spots in the skin; they rapidly increased in size and became pigmented; they generally projected above the level of the skin, but lately a few small subcutaneous tumours had appeared. During this period the glands in the groin had again enlarged, and now a large mass of glands could be felt in the left iliac fossa extending to the brim of the pelvis. The more superficial glands appeared darkish in colour under the skin. The patient had been treated for three months by X rays by Dr. Robert Knox, who stated in his report that there had not been any improvement. The patient also had some unpigmented moles on the left side of the neck and on the right scapula; a small pedunculated tumour had also appeared on the left thigh in the vicinity of the scars of those removed 18 months ago. The patient, who appeared to be otherwise healthy, was

married and had two children, one of whom had had a large mole removed below the right eye.

Mr. SHAW said that the microscopical sections showed the main growth of the leg (which was soft, pedunculated, white for the most part, with black patches in places, and measured 1¼ in. in diameter) roughly divided into two parts; the outer part was partly covered by an irregular layer of squamous epithelium. The cells of the tumour were arranged in masses separated by connective tissue; they were small and large in size, and very variable in shape, some round and many spindle in outline. All the stages of transition from round to spindle-shape were well seen. Many cells were deeply pigmented, and in some instances whole masses of cells were of a golden brown colour. Many of the pigmented cells were very large, and some contained two or more nuclei. The deeper part of the tumour was composed of smaller cells, mostly round in shape; among these were many well-formed blood-vessels, separated from the cells by a ring of loose connective tissue. The arrangement and character of the cells in the outer part were like those seen in "fleshy" moles, and the tumour undoubtedly arose from one of those. It was now a mixed round and spindle-celled melanotic sarcoma. In the inguinal gland the gland tissue was almost entirely replaced by growth. The growth was composed for the most part of round cells; spindle cells were present in places. Masses of pigmented cells were seen here and there. The tumour was a typical sarcoma. There were two very small moles with wide pedicle. They were covered with squamous epithelium: beneath that there were groups and columns of cells, rounded in shape. Many of the cells contained two nuclei and some contained three or four. The groups were separated by well-formed connective tissue; many cells lay free in the loose tissue just under the epithelium.

Mr. C. A. BALLANCE showed a patient on whom he had successfully performed the operation of Ligaturing the Innominate Artery for Subclavian Aneurysm.

SECTION OF ANÆSTHETICS.

Methyl and Acetone Chloroform.—The Pioneer of Anæsthesia by Ether Inhalation.

A MEETING of this section was held on Dec. 1st.

A letter from the editor of the British Pharmacopœia was read asking for an expression of opinion of the Section of Anæsthetics on the propriety of making methyl chloroform (as well as ethyl chloroform) official in the Pharmacopœia.

Dr. DUDLEY BUXTON said that chloroform prepared from methyl alcohol was, he believed, clinically as good as that obtained from ethylic alcohol. No appreciable difference had been detected throughout a trial, undertaken at his instance, of chloroform made from methyl alcohol and from acetone.

Dr. V. B. ORR said that Westminster Hospital used ethyl $CHCl_3$, but there was no difference detectable between ethyl and methyl $CHCl_3$. He thought a difference could be detected in the case of acetone $CHCl_3$.

Mrs. DICKINSON BERRY suggested that both methyl and acetone $CHCl_3$ should be added as official.

Dr. G. A. H. BARTON said he preferred methyl chloroform; he did not think acetone so good.

Mr. R. GILL said that provided there was purity of production there was no distinction, but that at St. Bartholomew's Hospital they used ethyl $CHCl_3$.

Dr. W. J. MCCARDIE said that as the end produce of manufacture was $CHCl_3$, it did not matter from what source it was obtained. At the Birmingham General Hospital he used methyl and acetone $CHCl_3$ indifferently.

Dr. HERBERT SCHARLIEB said that he had had various brands of chloroform prepared from all sources and he was convinced there was no difference at the time of administration or afterwards.

Mr. R. E. APPERLY thought that more acetone $CHCl_3$ was required to produce anæsthesia than in the case of ethyl or methyl $CHCl_3$.

Mr. H. E. G. BOYLE was convinced that ethyl $CHCl_3$ was less dangerous.

After Mr. GILL had asked whether the question was sufficiently important to be referred to a special general meeting of the section it was decided—

(1) That methyl $CHCl_3$ was sufficiently important to be included in the British Pharmacopœia; and (2) that acetone $CHCl_3$ should also be recommended to be included.

Dr. DUDLEY BUXTON read a paper the subject of which was Crawford Williamson Long, the Pioneer of Anæsthesia by Ether Inhalation: the Use of Ether 1842 and 1911. He pointed out that Long sprang from a family of strong intellectual bias, was himself at once an exceptionally able man, imbued with professional horror of advertisement and of premature exploitation of hastily carried out professional research. At the time of his first experiences with ether inhalation (1841) that drug was unknown except as an exhilarant, for which purpose it had been employed by Beddoes, Pearson, Warren, Cullen, and others. In this way it was employed by Long instead of nitrous oxide gas, the inhalation of which was a common pastime among the youth of England and the United States. Long, observing that the pain of bruises and bangs was not felt after breathing ether, was led to employ it to produce full surgical anæsthesia. This he did in 1842. Subsequent successes led to remonstrances from neighbouring medical men, who feared a disaster, since Pereira and others had taught that the stupor of ether was highly dangerous. Since Long practised in a small village out of touch with surgical centres, he refrained from publishing his work, although it was known throughout the State of Georgia. When Morton sought to obtain sole credit from Congress and a pecuniary reward for his public exhibition of his nostrum letheon, which was in fact sulphuric ether, Long was pursuaded by his friends to send a succinct account of his cases which had been done four and a half years earlier. He refused to court further recognition, and for many years Long's name was seldom associated with the great discovery of anæsthesia. Dr. Buxton's paper was illustrated by a series of interesting photographs of the original documents proving the justice of Long's claims to be accepted as the first person to suggest the use of ether for anæsthesia and the first person actually to employ it. Besides tracing Crawford Long's career, a full account based on the protocols was presented of the actual work done and the state of medical thought concerning mesmerism and other attempts at the achievement of painless surgery. The methods of using ether between 1841 and 1911 were considered and comparisons instituted, a final appeal being made that those who practised anæsthesia should supplement their practical skill by research so that the art should follow the extension of the science.

LARYNGOLOGICAL SECTION.

Exhibition of Cases and Specimens.

A MEETING of this section was held on Dec. 1st, Dr. STCLAIR THOMSON, the President, being in the chair.

Mr. J. EVERIDGE (introduced by the PRESIDENT) showed a Pedunculated Intrinsic Growth of the Larynx in a man aged 41. The case was shown at the last meeting. The growth had been removed, and the section under the microscope showed that it was a granuloma.

Dr. W. JOBSON HORNE showed a series of three cases of Specific Disease of the Tongue, Palate, and Fauces, one of the cases manifesting fenestræ the result of the disease in the posterior pillars of the fauces.

Dr. G. WILLIAM HILL showed a patient with Fixation of the Left Vocal Cord and Tracheal Tugging from Aortic Aneurysm, which gave rise to an interesting discussion initiated by Mr. W. PERMEWAN (Liverpool), who expressed the opinion that undiagnosed cases of recurrent paralysis of the left vocal cord would be more frequently found to be due to aneurysm than to any other cause—an opinion which was not, however, allowed to pass unchallenged.

Dr. HILL also showed some Pieces of a Chestnut he had removed with the aid of upper bronchoscopy from an infant 13 months old. The case was one of the youngest on record. —Several members advised lower bronchoscopy at such early ages in order to avoid the glottic œdema which is liable to follow the passage of the tube through the infantile glottis.

Dr. W. H. KELSON showed a case of Tuberculous Disease of the Larynx in a man, aged 37, to illustrate the fact that in tuberculous disease the larynx did not heal *pari passu* with the lung.

Dr. KELSON also exhibited a case of Abductor Paresis in a man, aged 44, with tuberculous disease of both apices, regarding which several members expressed dubiety as to the presence of any abductor disability.

Dr. DAN MCKENZIE showed a woman, aged 57 years, who had suffered from Prolonged Laryngeal Stenosis from some obscure inflammatory cause (? pneumococcus infection). The

practical interest in the case lay in the fact that in the early stages sarcoma of the pharynx had been closely simulated.

Dr. MCKENZIE also showed another Laryngeal Case of Doubtful Diagnosis.—This was considered by most of the speakers to be an example of simple pachydermia.

Mr. HERBERT TILLEY showed a large Suppurating Bony-walled Air Cell of the Right Middle Turbinal which had been associated with chronic empyema of the corresponding antrum.

Mr. TILLEY also showed an old man in whom an External Fistula of the Frontal Sinus had been cured by intra-nasal treatment.

Mr. GEORGE WILKINSON (Sheffield) exhibited a case of Unilateral Paralysis Affecting the Face, Pharynx, Larynx, and Tongue, acute in onset and diagnosed as due to acute polio-encephalitis.—The danger to the ear in bathing is well known, although it is not so frequently guarded against as it ought to be, but that the nasal sinuses may become infected in the same way has hitherto escaped notice. Mr. Wilkinson, however, in his notes of three cases illustrating Infection of the Accessory Sinuses by Entry of Water into the Nose during Bathing, and of a fourth case having possibly the same origin, drew attention to a point in etiology of which more would doubtless be heard.

Mr. WILKINSON also reported a case of Osteomyelitis from Acute Frontal Sinusitis.

Mr. E. W. BAIN exhibited a Papilloma growing from the Inferior Turbinal, a specimen which was not, however, considered to be an example of this uncommon type.—A discussion upon the rare squamous papilloma of the nose followed.

Dr. T. JEFFERSON FAULDER and Mr. W. H. HARMER showed a case of Pharyngeal Tuberculosis, with tuberculous lesions of other parts, which was under treatment by injections of tuberculin. The appearances of the pharyngeal ulcers were so unusual as to arouse considerable comment. It appeared that the tuberculous disease had spread from the tonsils to the pharyngeal wall after simple tonsillotomy some years ago, an event which many of the members regarded as strengthening the case in favour of entirely enucleating tonsils; and the same opinion was expressed in the discussion on a case shown by Dr. E. A. PETERS of an Irregular Growth from the Tonsil which had appeared in spite of an operation upon the tonsils seven years previously.

Dr. HILL showed two cases of Carcinoma of the Deep Pharynx prior to their treatment with radium.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Sterilisation from the Eugenic Standpoint.

A QUARTERLY meeting of this association was held at the rooms of the Medical Society of London on Nov. 21st, Dr. WILLIAM DAWSON, the President, being in the chair.

Before proceeding to the business of the day, the PRESIDENT referred in sympathetic terms to the decease since the last meeting of Dr. George Fielding Blandford, who was one of the oldest members of the association and a familiar figure at most of its meetings, where everyone listened with the greatest respect to his remarks. Dr. Blandford was a past President of the association, and had always taken a deep interest in lunacy legislation. The funeral was attended by some members of the association and a wreath was sent. He proposed that a vote of condolence be forwarded to the relatives. This was carried in silence by the members rising. He also referred to the death of Dr. James Murray Lindsay, another very old member, who had also been President of the association. During his presidency a very successful meeting was held at Buxton 18 years ago. Dr. Lindsay took a great interest in the pension question. A proposition that a letter of condolence be sent to the relatives of Dr. Lindsay was carried in the same sympathetic manner as was the former vote.

A very interesting paper was read by Dr. GEOFFREY CLARKE on Sterilisation from the Eugenic Standpoint. The paper was largely based upon a laborious investigation and analysis of the cases in the Long-Grove Asylum, Epsom. Dr. Clarke passed in review the recent discussions which had taken place concerning the elimination of what were called the unfit members of the community and the measures by which it was proposed to carry this out. The advocates of sterilisation averred that present-day medical and hygienic care resulted in keeping alive a greater proportion of weaklings than formerly; but it must be remembered that there were many others whose early years were full of ailments and a source of anxiety to their parents, but who yet blossomed into vigorous and healthy adults. The great question which required answering was, Had the advances in science tended to impair the mental and physical qualities of the race? He contended that the arguments and conclusions of stock-breeders could not be applied to human beings; the mental as well as the physical had to be reckoned with, and he did not think knowledge had yet advanced sufficiently far to enable anyone to say to certain people that they must not be permitted to reproduce their kind. Insanity was not a definite disease, but a variation from the average normal standard, the standard itself varying with the country and time, and even in different places in the same country—i.e., a person might not be able to stand the stress and surroundings of a London slum, but could live a successful life in a quiet country place. Moreover, there was a large class of mental degenerates who were yet not insane. If sterilisation were to be adopted it should take place in some forms of mental disease quite apart from the eugenic standpoint. He thought it had yet to be shown that any practicable scheme of sterilisation would materially diminish the normal rate of increase of insanity. He did not think that any hope of a material decrease of insanity was justified on the statistics at present available. There was great need of a better record of family histories which should be kept quite separate from the present statistics that had to be furnished, and which he regarded as useless for such an inquiry as the present one. At present the defective histories swamped the good ones. What was needed was full information, even if only a few families were taken, giving the normal as well as the abnormal.

The PRESIDENT congratulated Dr. Clarke on his paper, which was an attempt to place upon reasonable, scientific, and arguable lines the statements that had been made with regard to inheritance of insanity. At present there was much loose talk on the subject, and that made reliable statistics all the more necessary.

Dr. T. E. K. STANSFIELD, who had read a paper on a kindred subject at a recent meeting of the South-Eastern division of the association, said that all who had to do with asylum work would feel that something ought to be done to stem the flow of the insane and the unfit. Some years ago he suggested to the London Asylum Committee that there should be a special officer appointed whose function should be to go to the homes of these people, see the relatives, and estimate the amount of insanity, of course uncertified, present among them. He still hoped that something of the kind would be done.

Dr. M. EDEN PAUL agreed that there was not yet sufficient knowledge nor enough detail in family histories to enable one to say how much insanity was the direct result of inheritance. But he thought efforts should not be delayed simply because the information desired was not available in its entirety. The public was now happily awakening to the importance of trying to do something to improve human stock, and the public looked to members of the association for guidance in the matter. He did not agree that the experience of breeders of animals was not of much use in regard to human beings; it was the average which it was desired to raise, and that was also one of the aims of breeders; it was not always to raise highly specialised types. Sterilisation did not appear so necessary in the case of those who were definitely insane as for those whose mental capacity prevented certification but who were free to propagate their species, such as the feeble-minded. There seemed to be a case made out for small beginnings and for trying to guide public opinion on the matter.

Mr. H. WOLESLEY LEWIS, while agreeing that the material available did not justify sterilisation, thought that the mere fact that 50 per cent. of persons admitted into asylums had a hereditary nervous history made out a strong case for segregation, even permanent, and that might be extended to the habitual criminal and the inebriate class, as they both suffered from very defective self-control.

Dr. A. N. BOYCOTT regarded sterilisation as an impracticable policy, and thought it would remain so for some hundreds of years; moreover, no Government would listen to

such an idea. He did not express any opinion as to its merits in the abstract. He pointed out that statistics which lumped all forms of insanity together were of no use for such an inquiry as this.

Dr. M. A. COLLINS, referring to the statement regarding the increase of insanity, pointed out the more thorough system of certification, which included the kind of person who was formerly regarded as the harmless village idiot; and reminded the meeting of the increasing stress of life and the continual elevation of standards of education and equipment and also of the falling birth-rate.

Dr. C. HUBERT BOND thanked Dr. Clarke for his paper and for the time which he bestowed on analysing the Long-Grove statistics, which were very full, as he (Dr. Bond) made a point of trying, in every case admitted into Long-Grove, to ascertain from the superintendent of any previous asylum the patient had been in particulars of the case and also particulars concerning any relatives said to have been insane. In that way a multitude of information had accumulated there. He reminded the meeting of the falling birth-rate, in view of which the suggestion as to sterilisation was a very serious one; particularly was extreme caution necessary as proofs were not yet forthcoming. It seemed worthy the care of a special committee. Sterilisation might open the door to many very grave abuses.

Dr. D. G. THOMSON regarded such schemes as futile. Certainly sterilisation should not be one of the horrors of certification, because it would defeat its own ends, even if it were desirable. If people knew what it meant they would seek to still further evade certification than at present. Shortly, the medical inspection of school children would enable them to know more on the subject than at present; to wait until such knowledge was available would be far better than any attempt at tinkering with the subject.

Dr. J. G. SOUTAR said the question of heredity in mental conditions was one of the most difficult which met the physician day by day. People seemed to vary enormously in regard to heredity. There were stocks amongst one's patients so bad that they produced little but neurotic and insane progeny. Yet, notwithstanding that, there were an enormous number of highly competent men and women who had been doing the most important work of the world. That was a fact which should weigh with those who considered tables of heredity. He supported the idea of personal histories being taken much more carefully and thoroughly than at present, then one could get much nearer the truth than was possible now. One value of the paper was that it revealed a lack in the profession of adequate knowledge on the subject. The slums of the large cities of the empire were factories for the production of feeble-minded persons—their surroundings, their wages, the poor food they had, the bad clothes, the abominable houses, all constituted factors in that direction. Mothers in such conditions bringing forth children became more feeble with each birth, and starvation was the lot of the child. Something more might be done than at present to improve environment, for in that direction lay much hope for stemming the tide of mental disease.

Mr. H. F. HAYES NEWINGTON reminded the meeting that the union of sanity and insanity did not necessarily produce bad results in children, and that he regarded as an indication that Dame Nature, in her wisdom, was working to restore the normal. The main trend was not for such union to bring sanity down to the level of insanity but to approximate insanity nearer to sanity. He deprecated any attempt to interfere with the laws of reproduction; there were channels of improvement open short of sterilisation.

Mr. G. M. ROBERTSON said the whole problem rested largely on the question of heredity. He agreed that nature stepped in and did more than men's schemes were ever likely to do in an artificial way to check the production of the unfit. The largest number of cases of hereditary insanity occurred at an early age, and therefore in those who did not procreate. The general trend of disease was towards recovery, towards the normal. More good would be done by encouraging the marriage of physiologically healthy people. Sterilisation had only once been suggested to him. He quite agreed with what had been said about the more thorough record of family histories.

Dr. CLARKE replied, reminding the meeting of his chief point—namely, that sufficient information was not available on the mental side of heredity.

JOINT MEETING WITH THE GYNÆCOLOGICAL AND OBSTETRICAL SECTION OF THE ROYAL SOCIETY OF MEDICINE.

Amenorrhœal Insanity.

The association, at the close of the quarterly meeting recorded above, went into a joint session with the Section of Gynæcology and Obstetrics of the Royal Society of Medicine. Dr. AMAND J. M. ROUTH, the President of the section, being asked to take the chair.

Dr. C. T. EWART, in introducing for debate the subject of Amenorrhœal Insanity, dilated on the fact that menstruation was a rhythmical periodic function, that amenorrhœa was produced by the internal secretion of the ovaries, and he asked the question whether in insanity associated with the suspension of the menses the latter was a cause or an effect. He considered that there was a form of insanity due to suppression of the menstrual flow, and where that was the case the patients recovered in three months from the re-establishment of the menstruation. In every such case there was a heredity which caused the patient to have an unstable nervous system. Whatever toxic substance was contained in the menses was in such a case thrown into the general circulation, and such patients were peculiarly susceptible to toxic influences. He regarded good environment as the main factor in recovery. The paper led to a very interesting discussion.

Dr. ROBERT JONES (London County Asylum, Claybury) paid a high tribute to the author of the paper. He regarded the reproductive function as the highest function. Animals in captivity, such as at the Zoological Gardens, had good general health, but they suffered in the reproductive function. Presumably the nervous system was at fault. It was well known that the advent of menstruation was attended by definite and distinct psychical conditions, probably due to internal chemistry. Dr. Ewart found that heredity was responsible for 88 per cent. of the cases. Animals propagated their species in special seasons, the only exception being man. In regard to women, the two points which came out were periodicity and their liability to be affected by environment. The growth of plants could be greatly changed by modifying their environment, and he remarked that in 1824 Jenner pointed out, in the Philosophical Transactions, that the migration of birds was accompanied by a fleshy condition and increased size of their ovaries. Others had described atrophy of the ovary of the cuckoo in the month of July. He considered that the asylum was the best place in which to study those refined and subtle changes in the mental conditions due to forms of peripheral stimulation. The neurasthenic and the psychasthenic were splendid weather glasses. A large number of anæmic girls entered Claybury Asylum suffering from amenorrhœa, and in many when the menses were re-established mental recovery took place. Towards this Turkish baths and other means of eliminating toxins were of great value. The climacteric was also a very important period. A great deal of loose talk was indulged in on this subject, but everyone would admit that in all women menstruation imposed a considerable strain, while in those with an ill-balanced nervous system it was a dangerous period.

Dr. H. MACNAUGHTON JONES remarked that we had now much more accurate knowledge on the subject of menstruation, ovulation, and the relation of the latter to the metabolism of the ovary and to the general metabolism of the body, but particularly that of the uterus, both pregnant and non-pregnant; also as to the psychical effects of the ovarian secretion. With regard to the term "amenorrhœal insanity," there was nothing more dangerous than to introduce a term which was not strictly accurate. He did not see why a woman or girl who was psychasthenic or neurasthenic, and who also had stoppage of the flow, should be classed as a case of amenorrhœal insanity. He believed most cases of insanity had their hearts affected, but one would not suggest on that account that the people had cardiac insanity. He did not think the term under discussion was justified.

Dr. R. PERCY SMITH expressed his pleasure at hearing Dr. Macnaughton Jones's point of view. There might be amenorrhœa both in cases of melancholia and in cases of mania and insanity was often associated with amenorrhœa, but he did not think there was a special amenorrhœal insanity. It must be remembered that amenorrhœa was a very common symptom in all acute insanities in women. If the term was justifiable in any cases it was in those young women

in whom there had been prolonged fatigue or stress due to exhausting occupations, leading to great anæmia. If amenorrhœal insanity was a definite disease, it should be diagnosable early, not from the fact of recovery three months after the return of the menses.

Dr. RUSSELL (Glasgow) agreed with the criticism of the term which had been offered. In his experience amenorrhœa in cases which had nervous disturbance he regarded as the effect rather than the cause. He described one case in which mental trouble occurred simultaneously with a growth of the ovary, and when that was removed the normal mentality returned. Among young women of this class one could trace persistent neglect of the proper principles of feeding, and, very important indeed, regular relief of the bowel.

Dr. DAWSON (Dublin), President of the Medico-Psychological Association, found himself in agreement with the three last speakers. He did not believe there was a special form of insanity caused by amenorrhœa. The form of insanity most commonly associated with amenorrhœa was melancholia, and those subjects were most apt to have disorders of digestion, sometimes associated with diseased kidneys. Of course, he agreed that amenorrhœa affected the mental condition of the woman, even many sane women. Anæmic girls were particularly liable to nerve symptoms at menstruation.

Dr. WALTER S. A. GRIFFITH said that it was not very clear what was meant by amenorrhœa. The condition was not merely the loss of blood and mucus; that was a mere phenomenon in it. It would have been better if Dr. Ewart had defined exactly what was meant. He agreed with Dr. Percy Smith that the gynæcologist had no definite place in the asylum, and that the insane woman should not be touched in this respect unless an operation was required, such as for a growth. If a robust healthy girl did not menstruate for years there was something definite which neither iron, nor purgatives, nor exercise, nor fresh air would do good to.

Mr. HAYDN BROWN strongly advocated a greater use in the profession of psycho-therapy for nervous conditions.

Dr. W. H. B. STODDART associated himself with most of the speakers in denying that there was such a disease as amenorrhœal insanity. He regarded the amenorrhœa as simply a concomitant symptom. He, however, gave an instance of a woman upon whom he carried out a process of psycho-analysis, which was followed by a return of the menses, and from that time she improved mentally.

Dr. AMAND ROUTH congratulated the joint meeting on the discussion. It was known that menstruation was due to something, some chemical agent, which accumulated in the blood, and ultimately reached a certain pitch and encouraged the uterus and the ovaries to become active. The change in the blood was due to the formation of an excess of calcium, and the first act of the menstruating uterus was to excrete a large quantity of lime salts which lowered the lime content of the blood and encouraged hæmorrhage from the uterus. Amenorrhœa showed that the products which ought to be in the blood in order to encourage menstruation were absent. So probably amenorrhœa meant the patient suffered from a diminution of some substances and an excess of others.

Dr. EWART replied, but did not attempt to traverse all the arguments which had been adduced owing to the pressure of time.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 21st, Dr. S. Lodge, the President, being in the chair.—Dr. F. W. Eurich read a paper on Some Interesting Cases of Typhoid Fever. He said that diagnosis was often difficult at the beginning of a straightforward case, but it was infinitely more difficult in the absence of the usual signs and symptoms, several cases of which had recently come to his notice. Afebrile cases were especially difficult. He instanced one in which the gastro-intestinal symptoms had predominated, and in which a swinging temperature developed only when the diagnosis had been made on other grounds. In a second case a woman in failing health became suddenly comatose, with cyanosis and coldness. In her the nervous symptoms had predominated, and the absence of fever had increased the difficulty of arriving at the cause. The symptoms of a third patient began with neuritis; she rapidly developed a "typhoid state" and died. Even when fever occurred diagnosis was not always easy. A fatal attack began in the case of a man with a conjunction of the symptoms of appendicitis with those of dilated stomach. The occurrence of hæmatemesis did not help to clear the matter up, and a Widal test, which proved strongly positive, was done only because the patient's general state resembled typhoid fever. The complications of typhoid fever might occasionally be the first sign of the disease. A case illustrating this was described. The value of the Widal test was insisted upon. It was not positive before the eighth day, and might not become so until after convalescence. On the other hand, it remained so for months and even years. Hence with a positive Widal a previous attack must be excluded. Repeated examination was advisable, since both the development and the increase in intensity of an already positive Widal indicated an attack. A leucocyte examination was often helpful in addition, for marked leucocytosis or the presence of the alterations diagnostic of other conditions might exclude typhoid fever. Of course, suppuration accompanying enteric fever would cause leucocytosis.—The paper was discussed by the President, Dr. R. A. R. Lankester, Dr. A. F. Martin, Dr. J. Metcalfe, Dr. J. B. Lockerbie, Mr. F. W. Goyder, and Dr. W. Ward-Smith.—Dr. H. J. Campbell spoke of the variations in children, recurrent typhoid fever, and treatment.—Dr. Eurich replied briefly.—Dr. A. C. F. Rabagliati gave a short paper on Some Common Fallacies of Medical Logic. He said that medical men were usually fairly reliable as to the facts of a case, but that their deductions were by no means always the logical inference of their observations. Two fallacies were common. Because, for instance, two symptoms were constantly found together, it was not logical to elevate one to the position of being the cause of the other. Both might be due to a common cause. Again, because a certain disease appeared in a particular family at the same age, it did not therefore follow that the disease was hereditary. It was to some extent an assumption that the previous condition was the cause of the subsequent one. Neither did it follow that the recurrence of the same or even of different diseases in the same individual was the cause of any subsequent condition. All might be due to a common and wholly different cause. Various instances of these fallacies were given, and Dr. Rabagliati argued that real progress as to the causation and the treatment of disease could not be made unless accurate deductions and accurate facts were regarded as of equal importance.—The paper was discussed by the President and Mr. Goyder, and Dr. Rabagliati replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. F. H. Jacob, the President, being in the chair.—In opening a discussion on "Alcohol as a Drug," Dr. C. H. Cattle pointed out how custom had changed during the last 30 years with regard to the administration of alcohol in disease. When he started practising, alcohol was always given to consumptives; now the modern treatment of consumption was to increase the patient's resisting power, whereas modern science taught them that alcohol lowered the resistance. Surgeons now seldom used alcohol to combat traumatic shock. Enormous doses used to be given in cases of puerperal fever, but now it was seldom ordered. The records of the asylums of London showed some striking figures: in 1889, 1900 gallons of wine and spirits were consumed by patients; in 1905 only 250 gallons were used. Considering the fact that the number of patients was doubled during that period, it meant that only one-sixteenth the amount of alcohol was used in the latter period. The records of all the London hospitals showed the same result. No definite dose of alcohol is advised; he himself generally ordered when he did employ it in small doses, such as half an ounce every four hours. After referring to the physiological action of alcohol Dr. Cattle considered the circumstances in which alcohol should be used. They must remember that the patient had unlimited access to the drug, and therefore it should never be employed in cases of neurasthenia or dyspepsia. In severe febrile cases such as typhoid fever or pneumonia, where the pulse was failing, alcohol might be given in small doses, also in the first stage of threatened delirium tremens.—The President stated that he had found alcohol in large doses useful in cases of extreme collapse; he had also seen much improvement follow its use in cases of phthisis and eczema. However, he seldom especially ordered it except in cases where the temperature was very low and the pulse was small, then he found it useful as a temporary stimulant.—Dr. Sarah

Gray said that although personally a teetotaler she nevertheless found alcohol useful in stimulating the appetites of patients after long and severe illnesses. It was extremely dangerous to give it at the menopause or to neurasthenics.—Dr. A. Fulton pointed out the danger of giving it in cases of dysmenorrhœa or as a galactagogue.—Mr. J. Watson said that medical men seldom ordered alcohol—the patients themselves took it, and it was for the medical man to prohibit it or not, as he thought fit. He employed saline injections to combat shock. Alcohol in the form of champagne was useful in cases of post-anæsthetic vomiting.—Dr. T. D. Pryce thought they knew very little about the action of alcohol, and thought the disuse of alcohol was largely the result of fashion. He found that it stimulated the gastric secretion in cases of long illnesses such as typhoid fever, and it was very useful as a temporary stimulant.—Mr. A. R. Tweedie mentioned that in the late war small doses of alcohol were given to the men after forced marches to enable them to take their rations better.—Dr. M. Parry-Jones (Derby) was quite convinced of its value in urgent cases. The great opposition to alcohol was largely carried on by specialists, who did not have the practical experience of daily seeing urgent cases right through to convalescence. The vintage ordered was more important than the quantity.—Mr. R. Nesbitt, Dr. J. S. Bolton, and Dr. F. R. Mutch continued the discussion.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held in the Radcliffe Infirmary on Dec. 8th, Dr. W. Arthur Waters, Vice-president, being in the chair.—Mr. A. G. Vernon Harcourt gave a demonstration of a safe method of the administration of chloroform. He emphasised the importance of concentration as being the most essential feature to control. The instrument shown was designed to give varying percentages of chloroform, but a maximum 2 per cent. was sufficient for full anæsthesia in the hardest drinker. The details of the apparatus were explained, and the special points designed to overcome various defects, especially the varying temperature of the liquid chloroform in the receptacle bottle. A modification was shown by which air or oxygen could be supplied under a slight pressure. Deaths under chloroform by the use of this apparatus were preventable and post-anæsthetic sickness was greatly diminished.—Dr. W. Collier emphasised the dangers of chloroform even in the most skilled hands under the old method.—Mr. A. P. Dodds-Parker read a paper on the Fate of the Appendix after Abscess Formation. He said that he had been able to collect during the previous six years 17 cases, which he had tabulated, showing the history subsequent to abscess formation and the state of the appendix at the operation. Some of the specimens were shown. The conclusions drawn from this inquiry were: (1) The appendix was never destroyed, but was damaged; (2) there was liability to fresh attacks with such a diseased organ in the belly; (3) in the present keen struggle for existence it was wiser to remove such a menace to life; (4) the danger of a second operation was not great and herniæ might at the same time be cured. The mortality in the 17 cases recorded was *nil*.—In the discussion which followed Dr. Collier bore out Mr. Dodds-Parker's conclusions, emphasising the fact that appendicitis was now much more deadly than formerly. He also mentioned the good effects of fibrolysin in reducing the bulk of the adhesions in a case known to him.—Mr. E. Cecil Bevers mentioned that early operation had now resulted in the abscess formation being very rare; he also thought that it was justifiable to attempt to remove the appendix in many cases at the same time that the abscess was evacuated. He mentioned a case in which no appendix had been found in an operation subsequent to the evacuation of an abscess.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. T. H. Ionides, the President, being in the chair.—Mr. G. Morgan showed a baby of a few months of age with a Lipoma in each cheek.—Dr. Walter Broadbent exhibited a woman, aged 54, with a large Aneurysm of the third part of the arch of the aorta. She had a paralysed left vocal cord, tracheal tugging, and unequal pupils. There was dulness in the first, second, and third left spaces for about three inches from the edge of the sternum, and pulsation could be felt. The second sound was loud over this area, and the breath sounds were tracheal in character over the upper lobe of the lung. There was no history of syphilis, but she had done heavy lifting. The chief point of interest was that she had been under treatment for two years, and the aneurysm had become smaller and the pulsation less. This was very uncommon when the second or third part of the aorta was affected.—The President showed two Uteri, one with a very small fibroid, but which had given rise to severe hæmorrhage for nine months, and the other in an early stage of sloughing.—Mr. H. Nethersole Fletcher showed a Kidney removed for calculi. There was a 30 years history, during which the patient had passed 324 small stones. In the kidney removed there were some hundreds of minute stones, and one large branched one.—Dr. Herbert French read a paper entitled "High Blood Pressure and the Commoner Affections of Arteries."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Dec. 8th, Dr. A. Bostock Hill, the President, being in the chair.—In introducing a discussion upon the Notification of Births Act, 1907, Dr. A. A. Mussen stated that while 148 of the 250 metropolitan boroughs, county boroughs, and non-county boroughs had adopted the Act, exactly the same number among the 1500 urban and rural districts had adopted it. In Liverpool 84 per cent. of the total number of births were notified—60 per cent. by midwives, nearly 10 per cent. by medical men and over 10 per cent. by institutions. He did not regard the small number of notifications by medical practitioners with much concern, for notifications were received from other quarters of all the births concerning which administrative action could be taken. Regarding prosecutions under the Act in Liverpool, the health committee in a few cases instituted proceedings against uncertified women for not having notified births that had occurred under their care. In one or two cases a fine of 5*s*. was inflicted; in others the defendants were dealt with under the Midwives Act. The Act was very useful in assisting in the discovery of neglected cases of ophthalmia neonatorum, not of acute cases, but of those where the child had had slight conjunctivitis which had been treated by the mother or midwife and was getting into a chronic inflammatory condition which in time would cause opacity in the cornea. He was convinced that the Act was a valuable piece of legislation for directing the efforts of a sanitary authority, more especially of those having under their care a large poor-class population living under conditions detrimental to infant life. It gave the health department one of the best chances of teaching the rudiments of health in the homes of the poor at a time when they were exceptionally susceptible to such teaching.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS (INCORPORATED).—The annual dinner of this association was held in London on Dec. 8th at the Trocadero Restaurant under the chairmanship of the President, Mr. W. F. Dearden (Manchester). The dinner was well attended and a very enjoyable evening was spent. A letter of regret and good wishes was read by the chairman from Mr. C. F. G. Masterman, M.P., who, like Sir Thomas Oliver, was unable to be present. After the loyal toasts had been honoured, Dr. R. W. Edginton (Birmingham) proposed "The Home Department of His Majesty's Government." He spoke in particular of the branch which came into close touch with the work of the association, and expressed the thanks of the members to the heads of the department for their courtesy and interest. Sir Arthur Whitelegge, in reply to the toast, insisted upon the importance of standardising certificates, a process unfairly described by philistines as "red tape." He indicated some of the past and future activities of the officers of the department in fighting industrial disease, and referred to valuable recent researches into the questions of dust and humidity, of the methods of illumination, and of fatigue. Dr. T. M. Legge, in proposing the toast of the association, spoke of the dependence of the department upon the coöperation of the certifying factory surgeons, and pointed to the steady decline in industrial disease mortality which had occurred in recent years. The chairman replied and thanked Dr. Legge on behalf of the members for his individual interest in their work. The health of the guests was submitted in a breezy speech by Dr. J. H. Keay (Greenwich) and was responded to by Mr. R. J. N. Neville, M.P., and Dr. T. D. Lister, who rounded off the evening with some amusing "digressions."

Reviews and Notices of Books.

Reproduction in the Human Female: The Uterine Mucosa in the Resting, Menstrual, and Pregnant States, and the Function of the Decidua. By JAMES YOUNG, M.D. Edin., F.R.C.S. Edin. London and Edinburgh: William Green and Sons. 1911. Pp. 222 and 68 Plates. Price 21*s.*

THE scope of this work is better indicated by the subtitle than by the title, as it deals chiefly with the structure of the uterine mucous membrane and the changes that it undergoes during menstruation and pregnancy. This is only a small portion of the large problem of reproduction in the human female. It is, however, a very important part, and whatever we may think of the author's conclusions, there can be no question as to the great value of his researches and of the very suggestive nature of the work that he has done.

He regards the uterine mucosa as a soft, semi-fluid, protoplasmic mass, imperfectly differentiated into cellular elements, in which the intercellular spaces in all probability do not communicate with one another. The walls of the vessels are nothing more than flattened stroma cells, and except in the deepest layer of the mucosa they have no specialised supporting coats. The œdematous changes in the tissues which precede the escape of the blood in menstruation Dr. Young believes to be due to protoplasmic changes resulting in an active imbibition of fluid from the vessels. This conversion is brought about by the liberation in the tissues of crystalloidal or colloidal elements with an increased affinity for fluid. These tissue changes are due to some material (secretion or hormone) liberated by the ovary and reaching the protoplasm of the mucosa *viâ* the blood-vessels. In the pregnant tube, what the author calls the extra-chorionic influence of the fœtal cells—that is, the extraneous changes induced by the chorion in the maternal tissues—leads to marked degenerative changes. The extensive œdema and hæmorrhage which occur in the tubal wall are assumed to be due to the same causes as are operative in the uterus—namely, the production or liberation of crystalloids and an increase in the affinity of the tissues for fluid. The resulting splitting up and solution of the tissues explain the manner in which the implantation chamber is formed, and also the way in which many of the blood-vessels invade the maternal tissues to form large blood-tracks. In cases of chorion-epithelioma which the author has investigated the same conditions are found. The chorionic influence in some way or other determines the occurrence of protoplasmic changes in the cells, which lead to their imbibing fluid that can often be seen to have accumulated in the cell body under a hydrostatic pressure clearly higher than the pressure of the intravascular blood, and of the fluid in the surrounding tissue spaces. This, no doubt, must be explained in the same way by the occurrence of some chemical substance in the cell substance which is associated with the liberation of elements with a greater affinity for fluid. These changes are responsible for the marked œdematous infiltration and escape of blood from the vessels that are so characteristic of chorion-epithelioma.

Dr. Young describes a young ovum which he had the opportunity of examining and which he estimates to be of about the age of 13½ to 14½ days, or midway between the Teacher-Bryce ovum and that of Peters. The chief points of interest presented by this early ovum are that the blastocyst is completely filled with mesenchyme and is much smaller than the implantation chamber, while the decidual development is less evident than in any other young ovum. As a result of his investigations on the decidual changes in the uterus and the pregnant tube the author puts forward an ingenious theory as to the functions of the decidua. He suggests that its function is to prevent an irregular and increasing opening-up and expansion of the maternal vessels and a tearing-up of the mucosa by fluid and blood, after the tissue changes necessary for an adequate supply of the maternal blood for the engrafted ovum have been accomplished. It is by virtue of this action that the chorionic invasion of the tissues is limited and that the increase in the implantation chamber by an erosion or displacement of tissue is prevented.

The final chapter is devoted to a consideration of the various theories of the causation of œdema. Dr. Young says that his investigations—the first attempt to explain the mode of production of œdema by a histological survey of the tissue changes—have demonstrated that the fluid escapes from the vessels, not in response to a mechanical filtration, but in consequence of an alteration in the tissue protoplasm which determines an imbibition of the blood fluid.

The interpretation placed by the author upon the appearances he describes—which are illustrated by a beautiful series of 68 plates—is a very plausible one, and the book represents the outcome of a large amount of work and has much merit.

Untersuchungen über die Struktur der Blutzellen. Von Dr. ALFRED V. DESCATELLO und Dr. A. KRJUKOFF (Moskau), der Medizinischen Klinik in Innsbruck. Mit 8 chromolithographischen Tafeln. Berlin und Wien: Urban und Schwarzenberg. 1911. Pp. 119. Price, paper, 16 marks; bound, 18 marks.

Technik der Klinischen Blutuntersuchungen für Studierende und Aerzte. Von Dr. A. PAPPENHEIM, Berlin. Berlin: Julius Springer. 1911. Pp. 55. Price, paper, 2 marks; bound, 2.60 marks.

THE researches on which Dr. v. Descatello and Dr. Krjukoff's work is based were made in the medical clinic of Innsbruck during 1909–10. The chief fixing and staining method used was that of Pappenheim, who combined the Jenner stain, or, as it is called in Germany, the May-Grünwald stain, with the Giemsa stain. The fresh film is fixed for one minute with the Jenner stain, then stained for three minutes with the same stain diluted with an equal volume of distilled water, and after being washed in distilled water it is stained for 15 minutes in Giemsa's stain, washed, dried, and mounted in acid-free balsam. This method reveals in all nuclei of nucleated blood cells a fine dense network of fibrils (which the authors call the "primitive fibres") of uniform size, most being of a red-violet tinge. The protoplasm of all nucleated blood cells, with the exception of erythroblasts, also contains a network of fibrils, some of which are thicker than the nuclear fibres, and they stain in various nuances, and some of the fibres are in direct continuity with the fibres of the nucleus. Very careful descriptions are given of the various forms of cells found in blood, as revealed by the methods used by the authors, and 102 separate coloured figures are given on the eight plates. Most of the figures are drawings, some of them magnified 1000 times, from two cases which were observed with great care, one of carcinoma of the prostate with secondary metastasis in the bones and severe anæmia, the other a case of acute myelogenic leukæmia. The results are interesting, both to physiologists and pathologists. The authors conclude that to regard the nucleus as a vesicle with a membrane is not a correct view; rather are the body of the cell and the nucleus to be regarded as a complex network of fibres which permeates the whole mass of the cell. Each nucleus possesses the power and capacity by rearranging its fibres to make a curved or jointed polymorphonuclear form or convolution. Nucleus and protoplasm are not two sharply defined anatomical and functional parts of a cell; they are in the most intimate connexion, and fibres from the nucleus may pass into the

body of the cell. The granules seen in the protoplasm are not secretory products of the cell body, as surmised by Ehrlich, but are to be regarded as changed segments of the karyogenetic protoplasmic fibres. Very interesting are the observations on the blood plates, which are not all of one variety, and are chiefly derived from the cytoplasm of neutrophile leucocytes, though other cells give rise to them, and they differ according to their source. The book is a piece of painstaking, laborious work.

Dr. Pappenheim's opuscule is a reprint from Carl Neuberg's "Handbuch der Ausscheidungen und Körperflüssigkeiten" (1911), and is written by one who is a recognised authority on the subject. It deals with the microscopic examination of blood, normal and abnormal, hæmocytometry and hæmoglobinometry. According to the author, the one method for fixing and colouring blood films is the combined May-Giemsa (Jenner) colouration, as invented by himself. There are no illustrations. It is a commendable and useful little brochure.

The Errors of Accommodation and Refraction of the Eye and Their Treatment. A Handbook for Students. By ERNEST CLARKE. London: Baillière, Tindall, and Cox. 1911. Pp. 228. Price 5*s.* net.

WHEN a book has reached its third edition it must be concluded that it fulfils the demands of a considerable body of readers. There are several good books on errors of refraction and cognate disabilities of the eye, but Mr. Ernest Clarke's book can well hold its own amongst them. The optical side of ophthalmology has proved a terrible stumbling-block in the path of the medical student and practitioner, and they are ever ready to hail some expanded and, so far as may be, simplified exposition of the subject. Mr. Clarke, by the free use of diagrams and the avoidance of formulæ, has given a lucid account of the dioptrics of the eye and the optical errors which so frequently affect it. His teaching as to the diagnosis and correction of such errors is satisfactory and trustworthy. We do not agree with his strong advocacy of the ophthalmometer as a clinical instrument, but that is a detail of relatively small importance. The book has been improved in successive editions and minor blemishes will doubtless be removed in the editions yet to come.

A Text-book of Physiology for Medical Students and Physicians By WILLIAM H. HOWELL, Ph.D., M.D., Sc.D., LL.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Fourth edition, thoroughly revised. London: W. B. Saunders Company. 1911. Pp. 1018. Price 18*s.* net.

THE issue of the fourth edition of Professor Howell's "Text-book of Physiology"—a book which is now recognised as a standard and trustworthy work on both sides of the Atlantic—will be welcomed. The last edition was reprinted in January and July, 1910. The ever-widening boundaries of physiology make it more and more difficult for any one individual to gain a familiar, far less a first-hand, knowledge, not only of its by-ways, but of some of its main routes. This work is not an arid statement of facts, dry and dogmatic in form; on the contrary, it is characterised both by suggestiveness and a vigorous vitality, while it forms a compact epitome of the salient and pregnant facts, and their application in practical medicine, such as can be given only in a work written by a single author who has proved himself both a successful teacher and experimenter, and who has a wide and comprehensive knowledge of physiological literature in all its branches.

Professor Howell's text-book is well abreast of the ever-advancing tide of physiological knowledge. The author has succeeded in embodying in his text the outcome of the two principles which guided him in writing this book—viz., to set forth the presentation of facts and theories in simple and lucid form, and to select the material with judicious limitations. The general arrangement in previous editions is adhered to. The schema displaying the innervation of voluntary skeletal muscles still stands in its simplicity, showing only two neurons from cerebrum to muscle. The pyramidal tract has now been demonstrated not to terminate in the cord, as figured in this schema. The sections on muscle, nerve, and central nervous system are added to here and there, and, as in previous editions, a special chapter is devoted to the physiology of sleep, a subject too frequently dealt with in a cursory manner or even omitted altogether. The views of Head and Rivers on protopathic, epicritic, and deep sensibility are set forth pretty fully, but the author does not submit the results to detailed criticism. There is little change in the description of the senses of vision and hearing. An excellent dissection shows the position of the semicircular canals in the pigeon and the relations of their ampullary ends. The whole question of the functions of these canals is dealt with very fully; in fact, the exposition is one of the best and most concise in any text-book of physiology intended for the use of students. The introduction of the dates of the successive researches on which each experimenter's view is founded enables the reader to see how recent our real knowledge actually is—e.g., Flourens (1824), Goltz (1870). For the present, "while the endolymph theory may be criticised easily, no other equally satisfactory theory has been suggested to take its place." This statement may be taken as an example of the author's fairness in dealing with a complex subject after setting forth the main facts. It is satisfactory to find that such a question as "reaction of the blood" is dealt with in the light of the latest advances in physical chemistry, and that the blue reaction of litmus to blood plasma is no longer the basis as a true indication of alkalinity.

Physiology links itself up with the question of immunity and the wonderful protective adaptation of the body towards the invasion of foreign cells. The author's account of this and allied matters forms an excellent introduction to the more elaborate treatment of this subject, which the student will learn from the pathologist and the clinician later. Here and there histological figures, some coloured, are introduced, but leucocytes in all their varieties are described without the aid of diagrams—coloured or otherwise. Reference is made, however, to Pappenheim's Atlas, an atlas which the average student is not likely to consult. On p. 447, when mentioning certain facts regarding coagulation of the blood, it would have been instructive to insert after each of the names mentioned the dates of their discoveries. The presentment of the whole question of coagulation of the blood, however, is both excellent and suggestive.

The importance of a knowledge of venous and capillary pressures becomes daily more important. This subject is dealt with more fully than in most text-books, and so also is what is called the "hydrostatic effect," which enables the author to set forth the important work done by Leonard Hill and his pupils. Full effect also is given to the recent work of Mackenzie on the heart and pulse. Having regard to what is called "heart block" from the clinician's point of view in relation to the auriculo-ventricular bundle, there is a very good account of the arrangement of the heart fibres—even to the recent description by Mall—nor are the observations of Keith and Flack omitted. When discussing the myogenic *versus* the neurogenic theory of the heart beat the author puts on one page (556) in small print a succinct account of the "dividing line between the ancient and the modern views of the heart beat as is found in the work of William

Harvey (1628)." On the same page (556) we find that Remak (Robert) discovered intrinsic nerve ganglia in the heart in 1844, while in large text on p. 555 the date is given as 1848—a small slip which has escaped revision.

The tracings of blood pressure and respiratory movements are very good. An electrovagogram from Einthoven is given to show the electrical changes in the different fibres of the vagus caused by respirations and the heart beats, but there are no X ray photographs to show the movements of the contents of the intestinal tract. The chapter on the ductless glands and internal secretions is pithy, compact, and excellent throughout. A relatively long and critical account is given of the action of alcohol. The views of Darwin, de Vries, and Mendel are set forth in the interesting chapter on heredity, while the important subjects of growth and senescence are not forgotten.

The author is to be congratulated on the comprehensiveness and thoroughness of his work—a work which should be read by every advanced student of physiology, as well as by the practitioner.

The Deaf Child: A Manual for Teachers and Scholars. By JAMES KERR LOVE, M.D. Glasg., Aural Surgeon, Glasgow Royal Infirmary, Aurist to Glasgow Institution for Education of the Deaf and Dumb, &c. With 10 illustrations. London: Simpkin, Marshall, Hamilton, Kent, and Co; Bristol: John Wright and Son, Limited. 1911. Pp. 192. Price 4*s.* 6*d.* net.

Dr. Kerr Love opens with a careful *résumé* of the various work which has been done towards the education of the deaf. He next proceeds to argue as to the value and the necessity for the proper classification of deaf children, dividing them as fit for ordinary schools, fit for front row of ordinary schools, the hard of hearing, fit for deaf schools, and the mentally defective. He concludes his introductory chapter by a short dissertation on the advisability or otherwise of the deaf child leaving his home and indicates when he should begin to be instructed. After a short and popular exposition of the causes of deafness, with a few words on the physiology of hearing, we come to a chapter of great interest on the operation of the language centres in normal and abnormal children. Dr. Kerr Love shows the various ways in which the working of thought, hearing, and speech is carried on in normal and abnormal children, and here makes full use of the cases of Helen Keller and Laura Bridgeman.

There is a very interesting statement made on p. 64 with regard to the effect of adenoids in children. Only 12·8 per cent. out of 3500 Swedish children examined had well-marked adenoids, though another return shows that 16 per cent. had sufficient adenoids to demand their removal. This would seem to be a low proportion, compared with that existing certainly in England at the present time. Again, on p. 65, Dr. Kerr Love makes a most pertinent statement when he says that the only test of hearing of any practical value in the school child is the human voice, and that the most uniform method of applying the test is by whispered speech. He states later that the average hearing distance for whispered speech in a noiseless room is about 25 yards, and he says that a child who is able to hear whispered speech at 5 yards only may be called slightly hard of hearing; but as sound decreases with the square of the distance, one would think that the 5 yards might be considerably increased for the slightly hard of hearing. However, that is not of any great moment, and does not in the least diminish the value of the author's observations. Continuing this subject, the propriety of determining what residual hearing there is in each subject is discussed, and a chart of a great many different children is given, showing the various islands of active nerve tissue remaining in their cochleæ.

A chapter is devoted to the various conditions of education of the deaf, and gives fairly complete records of the different schools and the methods employed there, both in the British Isles and abroad. Amongst the interesting facts mentioned is that the first public school in Great Britain for the teaching of deaf children was founded in 1792 in the Old Kent-road, though it was preceded by just 32 years by that of the Abbé de l'Epée in Paris. The next chapter is concerned with the methods of education, and very fully deals with the various aspects, the greater need for more schools, and the better methods, or combination of methods, that should be employed. The treatment of deaf children forms the subject matter of the seventh chapter, and is divided into the surgical and the educational treatment. The eighth chapter is on lip-reading, and this is followed by an appendix on the capacity of the deaf for higher education, consisting largely of letters from various deaf people who are holding useful and honourable situations in life. A second appendix deals with the condition of the eyes of a deaf child, by Dr. H. Wright Thomson, and it appears from this report that the visual condition of children in the deaf-and-dumb schools is worse than that which obtains in any board school. Appendix 3 is a short chapter on stammering and cleft palate.

We can hardly speak in too high terms of this book. It is one which has been written largely for the teacher of deaf mutes and deaf children, and for school medical officers, but it will appeal not only to them but to the entire medical profession; and over and above them to all those who are interested in the welfare of these unfortunate beings who have lost the power of hearing in early childhood, and who, without a really careful training, are precluded from occupying any useful sphere in life, but who, if properly taught, are fully capable often of great intellectual development. It is a book which should be in the hands of all teachers of the deaf and of those interested in the question, whether from a social, educational, or charitable aspect.

Sociology Applied to Practical Politics. By JOHN BEATTIE CROZIER, Hon. LL.D., Author of "Civilisation and Progress," &c. London: Longmans, Green, and Co. 1911. Pp. 320. Price 9*s.* net.

Dr. Beattie Crozier, who was at one time in practice as a physician, has devoted many years to the study of sociology, and has made important contributions to its literature. His scientific and medical training gives him a point of view rarely possessed by purely political writers, while his connexion with Canada tends to give a breadth of idea scarcely attainable by writers whose horizon is bounded by the limits of England.

The volume comprises reprints of articles from the *Fortnightly Review*, the *Daily Mail*, and the *New Age*, ranging in date from 1902 to 1908, and embracing subjects falling chiefly under two heads—Socialism and Fiscal Policy. Some of the articles on Socialism are direct criticisms of Karl Marx, the Fabian Society, and Mr. H. G. Wells. The depth of these articles varies perhaps with the depths of the persons criticised. A writer might sport with Mr. Wells, possibly banter the Fabians, but could anyone be light-hearted with Karl Marx? It seems hardly possible, but Dr. Crozier does his best, with very readable results. If there are fallacies in the criticism, there are plenty in "Das Kapital," and perhaps the most glaring is the Socialist notion that manual labour is the only labour performed on the earth and the only effort deserving of payment or reward. If we follow the interpretation of advanced Socialists to its logical conclusions, within the limits of our profession the surgeon would be entitled to fees because he is a manual labourer; the physician could demand nothing

but bare honours. Neither the labour and time spent in training the eye and hand of the surgeon nor the logical faculties of the physician have any recognition as "work."

"Suggestions for a New Political Party" is the title of a somewhat diffuse chapter of thoughts on Party politics, as the game is now played in England. There is much that is refreshing in these pages to men who have not been brought up to believe that politicians have a monopoly of intelligence, learning, and integrity, but the subject is too vague for definite instruction. A chapter on "Taxation Schemes and their Values," reprinted from the *Financial Review of Reviews* (April, 1909), is much more concise, and gives a valuable sketch of the theories of land taxers headed by Henry George, and those of the extinguishers of capital—Mr. Sidney Webb and Mr. Bernard Shaw on the one hand, and on the other of the Independent Labour Party, "all of them the pale ex-sanguined ghosts of Karl Marx and the army of continental Socialists." Finally, Dr. Crozier becomes too technical for ordinary palates in the consideration of fiscal policy and "the English banking system," though even here the untechnical person finds valuable clues to modern lines of thought on these matters.

Diseases of the Skin, an Outline of the Principles and Practice of Dermatology. By Sir MALCOLM MORRIS, K.C.V.O., Surgeon to the Skin Department of the Seamen's Hospital, Greenwich. Fifth edition, revised by the Author, with the assistance of S. ERNEST DORE, M.D. Cantab., M.R.C.P. Lond.; Assistant in the Skin Department of the Middlesex Hospital. With 10 coloured and 67 black and white plates. London: Cassell and Co., Limited. 1911. Pp. 762. Price 10*s.* 6*d.*

THE first edition of this work appeared 18 years ago, and the reception which it then met with and the issue of four subsequent editions prove its value. We welcome this, the fifth, edition, for it will more than maintain the reputation of its predecessors. It contains in a fairly small volume a clear, exact, and indeed authoritative account of a branch of medical practice which is among the most difficult of all for the student to learn; and it is illustrated by a large number of excellent plates, several of them in colours, which give very good representations of the appearances presented by disease. The present edition has been brought fully up to date, and in this the author has had the assistance of Dr. Ernest Dore. No more useful treatise on cutaneous medicine has been published, and the student or practitioner who desires to acquire or improve his knowledge of this branch of medicine cannot do better than read this work.

Love and Marriage. By ELLEN KEY. Translated from the Swedish by ARTHUR G. CHATER. London and New York: G. P. Putnam's Sons. 1911. Pp. 399. Price 6*s.* net.

WE cannot quite understand whether this book is intended to be a scientific contribution to all-important questions relating to love and marriage, or merely an account, by a member thereof, of the views of a particular sect, referred to on p. 6 and elsewhere throughout the book, as "those who profess the faith of Life." The book contains a number of opinions and statements apparently quite unsupported by any evidence, and in places self-contradictory. Many of the chapters treat of generally received notions of morality and religion, as matters which the believers in "the faith of Life" consider utterly false and wrong. But there is nothing to show that the views are superior in ethical value to, rest on a firmer basis than, or would bring about better results than accepted ideas. The first seven chapters are somewhat disjointed disquisitions upon love, the right of motherhood, exemption from motherhood, and collective motherliness. They contain passage after passage of unsupported opinions, written (this may be due to bad translation) in a singularly involved and high-flown style. Apparently their purport is to lead up to the last two chapters, entitled respectively, "Free Divorce" and "A New Marriage Law." So far as we understand Miss Key's arguments, the conclusions of the first-named chapter seem to be: (1) Early marriages are the great remedy for immorality (p. 311); but (2) early marriages are often failures, as the choice is often unsuitable, and the individuals themselves change in the course of years (p. 312 *et seq.*); therefore (3) free divorce must accompany early marriages.

While everyone will allow that the present-day marriage law is not perfect, that the divorce laws are unjust, and that unhappy marriages are by far too common, we cannot think that the opinions expressed in this book, if carried into practice, would bring about a better or more desirable state of matters than exists at present.

Plastic and Cosmetic Surgery. By FREDERICK STRANGE KOLLE, M.D., Fellow of New York Academy of Medicine. With 1 coloured plate and 522 illustrations in the text. London and New York: D. Appleton and Co. 1911. Pp. 511. Price 21*s.* net.

THE value of cosmetic surgery is hardly sufficiently recognised by the medical profession, with the result that much of the work has fallen into the hands of unqualified practitioners and beauty specialists. It is deserving of more careful study, for slight malformations which appear unimportant to others are often the cause of the greatest annoyance to those who possess them. The work before us deals with almost the whole range of cosmetic surgery. The earlier chapters are concerned with the antiseptics to be used and the dressings and sutures to be employed. The most suitable anæsthetics for cosmetic work are also discussed, and for local anæsthesia the author prefers beta eucaine. The general principles are also laid down and skin-grafting is described. Then the several regions are considered in turn, the surgery of the eyelids being taken first. The surgery of the auricle of the ear follows, and the author describes how to remedy outstanding ears. Hare-lip is dealt with, but nothing is said of the surgery of cleft palate, though that surely belongs to plastic surgery. The author describes the employment of paraffin for the remedy of deformities, and a full account of rhinoplasty is also given. He concludes with such minor operations as the electrolysis of nævi and the removal of superfluous hairs. We cannot agree with the statement that it is ever necessary to use such a large current as one of 14 milliampères for the electrolysis of a hair.

We are pleased with this work; it should prove useful to those who wish to practise this branch of surgery.

The Technology of Bread-making. By WILLIAM JAGO, F.I.C., F.C.S., Barrister-at-law; and WILLIAM C. JAGO. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1911. Pp. 908. Price 21*s.* net.

IT is difficult to find any topic of importance connected with bread which has been left out of consideration in this volume. The work is thorough from beginning to end, and no one writes with greater experience of the subject than the senior author. He wrote a work in 1886 which was responsible for much progress in bread-making; he reminded the practical baker of the scientific processes connected with the stages in his art, and exhorted him to apply scientific considerations to the making of bread, which after all is not a simple process. Rule of thumb often spelt failure, the application of scientific principles discovered to what failure was due, and nowadays the baker has no excuse left for a spoiled loaf. The importance of all this was steadily realised, education

in the matter of bread-making became a real thing, and the baker, if for only business reasons, had to adopt a system which he knew secured him a constant and standard product.

In 1895 Mr. Jago took considerable pains to bring his work up to a level consistent with the rapid advances which had been made in the science and art of bread-making. In his work published that year he entered fully into the part which chemistry and biology played in the conversion of flour into bread, while he carefully explained the dietetic significance of the various constituents of flour. His familiarity with the engineering side of bread-making was also obvious from the excellent monographs on the mechanics of the bakery. The book has now grown into a bulky volume, and in the preparation of the present work he has had the advantage of his son's assistance, Mr. William C. Jago, who has given considerable attention to the practical application of chemical methods in the mill and the factory, and who further has studied the applications of modern biology and bacteriology. The progressive baker will be grateful for the care which father and son have taken to keep their account of the subject in close touch with modern developments; but technology apart, there are many chapters which are of general interest. We may mention, for example, those in which the authors views are given on the bleaching of flour, flour and bread improvers, nutritive value and digestibility of bread, and standard bread, all of which form instructive reading in dietetics.

LIBRARY TABLE.

Die Neuralgien der Täglichen Praxis. By Dr. O. SCHELLONG, Königsberg, Prussia. Berlin: Julius Springer. 1911. Pp. 83. Price 1.80 marks.—The author describes in some detail the experiences of six years of general practice, so far as the varieties of neuralgia are concerned. Of some 2630 patients, no fewer than 458 suffered from neuralgia in one form or another. This seems an unusually high percentage, and if we are to judge from certain of the clinical histories furnished by the author the diagnosis of neuralgia may very well be questioned in some, especially since a fourth of his cases appear to have been among children. He subdivides his material into the different accepted groups of the disease, and supplies clinical instances of these different localisations. The longest chapter in the book is that on neuralgia of the brachial plexus, but there is no reference to cervical rib in this connexion. The paragraphs on treatment are for the most part taken up with the description of simple and palliative methods. The drug with which the author appears to have had the best results is quinine.

Psychiatrische Vorträge für Aerzte, Erzieher, und Eltern (Zweite Serie). By Prof. Dr. G. ANTON, Director of the Clinic for Nervous and Mental Disease in Halle. Berlin: S. Karger. 1911. Pp. 77. Price 2 marks.—This volume consists of five essays which may be supposed to be of interest for parents and teachers, as well as for physicians. They deal with subjects widely separated from one another, and the exigencies of his audiences (for the essays are reprinted from addresses read before societies) have compelled the author to deal with his material in a more or less popular way. The first essay is on the expression of the emotions in health and in disease; the second on epidemics of mental disturbance in past and present times; the third deals with the mental upbringing of children; the fourth is concerned with alcohol and its influence on offspring; and the fifth with the causation of epilepsy, and its operative treatment. The essays are readable and instructive, but somewhat slight, and not a little debateable matter is incorporated. Dr. Anton seems to have had unusually good results in his cases of chronic epilepsy which have been submitted to surgical interference. The second essay contains some curious but scarcely novel information on mediæval and modern epidemic hysteria, on lycanthropy and the were-wolf legends, on jumping mania, and kindred topics.

Five Months in a London Hospital. By KATHERINE ROBERTS. Letchworth: Garden City Press, Limited. 1911. Pp. 145. Price 2*s.* 6*d.* cloth, 1*s.* paper.—Written in diary form by a probationer nurse undergoing training in a maternity hospital, the author has daily set down her impressions of the strenuous work she had to carry out at the institution. She informs us that she has neither the strength nor time to describe in detail the work done by the probationer, as it required the combined energies of a hard-working and experienced charwoman, a housemaid, a "general," and a trained nurse to do it anything like justice. So hard was her work that her feet became swollen and blistered. "It seems to me," she remarks, "that what is badly wanted in London is a hospital where only ladies are admitted as nurses and sisters, where the charwoman's work is done by charwomen, the cooking and housemaid's work by cooks and housemaids, the nurses being only asked to do nursing, which in itself, if properly done, would fill up all their time." It is a pity that the name of the hospital referred to is not stated anywhere in the text; the writer evidently does not wish it to become known. Throughout the book there runs a vein of continual grumbling against the conditions under which the author had to work as a probationer midwife. The various difficulties are put forward in such a frank and open way that one is almost convinced that there is no exaggeration. The author, who is married and the mother of children, took up nursing because she liked it, and she is markedly sympathetic to her maternity patients, although she confesses in some of her anecdotes instances where her sympathy caused her to disregard the orders of the hospital and the medical staff. As the author shows a spirit of antagonism also to the nursing sisters under whom she had to serve it is impossible not to see that she is a biased witness. But parts of the book offer considerable food for thought, for they suggest what the internal economy of a hospital ought not to be; some passages are distinctly sensational, and if true require attention.

"*Medicus,*" *Guide Annuaire des Étudiants et des Praticiens (Médecine, Chirurgie, Odontologie, et Pharmacie).* Par A. ROUZAUD. Paris: 41, Rue des Écoles. 1911–12. Pp. 1696. Price 5 francs (4*s.* 2*d.*).—This useful book of reference is divided into six parts, in the first two of which are contained systematic information relative to the teaching of medicine, pharmacy, and dentistry in France, with lists of hospitals, asylums, scientific societies, students' societies, and the military, naval, and colonial services. There are also lists of the principal medical journals, both French and foreign, and of recent medical works issued by French publishers. The third part enumerates the principal foreign schools of medicine, with some historical account, a *précis* of their curricula, and the names of the faculties. The fourth part consists of a dictionary of the law as it affects medical men in France and of medical jurisprudence, arranged by M. Marcel Petit, advocate of the Paris Court of Appeal. The fifth part consists of a summary of the laws, decrees, and ordinances affecting the practice of medicine, pharmacy, and dentistry in France and her colonies, public health, hygiene, the sanitary police, the Public Assistance, and such like. The principal mineral watering-places, both French and foreign, are given and briefly described. Part 6 contains a directory, both alphabetical and local, of the medical men, dentists, pharmacists of France, as well of the civil and military medical men of the French colonies.

The Kala-azar Bulletin.—Owing to the great advances which have recently taken place in our knowledge of the various forms of leishmaniosis it was decided to issue, by arrangement with the honorary managing committee of the Sleeping Sickness Bureau, a publication on the lines of the *Sleeping Sickness Bureau Bulletin*, which has proved so successful and which has been found so helpful by all who have concern with trypanosomiasis of any kind. The first, or introductory, number of the new *Bulletin* has now been issued; it consists entirely of a "List of References" of the titles of some 900 publications relating to the affections known to be caused by leishmania, including kala-azar, as met with in India; infantile kala-azar or ponos, sometimes called infantile splenic anæmia, which is found on the shores of the Mediterranean or elsewhere; and Oriental sore, which is common in some parts of the East. This list has been carefully compiled by Mr. R. L. Sheppard, librarian to the Sleeping Sickness Bureau: it includes all the known works on this subject published up to the end of June, 1911. The future numbers of the *Bulletin* will be issued quarterly and will be under the editorship of Dr. C. M. Wenyon, protozoologist to the London School of Tropical Medicine. The *Kala-azar Bulletin* promises to fulfil a very useful purpose and will be welcomed by all who are interested in leishmaniosis.

New Year's Diaries and Visiting Lists.—To the medical man, as to other men, the Diary is practically indispensable, while the Visiting List has been devised especially for his convenience. From Messrs. Cassell and Co. we have received specimen copies of several of the well-known original Letts's Diaries for 1912. Those more especially suited to the needs of the medical man are the *Rough Diaries*, of which No. 31 contains a week on each opening of its foolscap pages (price 1*s.* 6*d.*, or interleaved blotting, 2*s.* 6*d.*); No. 32, of like size, which contains a week on each page and is interleaved blotting, for 1*s.* 6*d.*; and Letts's *Office Diary and Almanack*, No. 10, price 4*s.* 6*d.*, which contains six days on an opening. The foregoing diaries contain in the preface much useful reference information. The *Pocket Diary*, No. 111, is sold in three bindings, from 2*s.* to 3*s.* net. Letts's *Nurses' Report Book and Diary*, in red leather, price 2*s.* net, contains tabulated pages for case records and a week-to-the-opening diary, with cash account and memorandum pages. Finally, Letts's *Medical Diary* is a combined Diary and Visiting List, giving a week to an opening. The price varies according to binding, from 2*s.* 6*d.* to 4*s.* ruled for 54 patients, and from 4*s.* to 5*s.* 6*d.* ruled for 108 patients. The preface contains medical reference data and general information of special service to the medical practitioner. Letts's publications contain as usual an accident insurance coupon, and we are informed that claims amounting to £3500 have been paid to holders of these coupons. Another well-known publication is Smith's *Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements*, which has served the needs of the medical profession for 66 consecutive years. It can be obtained from the publishers, Messrs. Hazell, Watson, and Viney, 52, Long-acre, London, W.C., at prices according to binding from 2*s.* 6*d.* to 6*s.* 6*d.* The *Professional Pocket-book, Daily and Hourly Engagement Diary* (Rudall, Carte, and Co., 23, Berners-street, London, W.) is intended for musicians rather than for medical men, though it might conceivably be made use of by the latter as an engagement book. The open page contains a week in parallel columns of days, the hours being arranged down the left. The engagement pages are in three separate parts of four months each, enclosed in a leather case. From John Walker and Co. also we have received representative samples of their diaries. Walker's *Society Diary*, No. 48, is a handy book, in red cloth, giving a day to a page of excellent paper, and containing an engagement calendar, price 2*s.* 6*d.* Walker's *Loose Leaf Diaries*, especially the medical *Loose Leaf Pocket Book*, containing visiting list, cash accounts, treatment sheets, case sheets, temperature charts, and other useful pages, will commend themselves from the fact that their bulk can be reduced at pleasure by inserting only a few sheets and replacing them as necessary; moreover, the beginning of the following year can thus be carried simultaneously with the close of the current year. They are fitted with a simple device for opening the rings, and contain stamp, card, and other pockets. Messrs. Walker also send several other forms of diary of various sizes and styles, at prices from 1*s.* up, as well as the *Imperial* and the *Graphic Daily Wall Calendars*, in which the figures are boldly printed in colours. We have also received from Messrs. Borroughs and Wellcome a copy of the well-known *Wellcome Photographic Exposure Record and Diary* for 1912, which contains information of all kinds and in the fullest quantity relative to factorial and time development, machine, tank, or stand development, the oil pigment process, contact printing by artificial light, colour photography, the actinic values of lights, light tables, and the Wellcome exposure calculator, whereby it is possible to ascertain the correct exposure under any combination of conditions. Separate editions are published for the Northern Hemisphere and Tropics, the Southern Hemisphere and Tropics, and the United States, and intending purchasers should state which is desired. It can be had from all photographic dealers, price (in the British Isles) 1*s.*

JOURNALS AND MAGAZINES.

Annals of Tropical Medicine and Parasitology. Vol. V., No. 1. Liverpool: University Press. Pp. 131. Price 7*s.* 6*d.* net.—This number of the *Annals of Tropical Medicine and Parasitology* contains the following contributions: (1) Further Experimental Researches on the Etiology of Endemic Goitre, by Dr. Robert McCarrison; (2) Non-ulcerating Oriental Sore, with a New Similar Parasite in *Erthesina fullo* (Thumb), a Pentatomid Bug, by Captain R. Markham Carter, I.M.S.; (3) Infantile Leishmaniasis (Marda tal Biccia) in Malta, by Dr. A. Critien; (4) A Research into the Production, Life, and Death of Crescents in Malignant Tertian Malaria, in Treated and Untreated Cases, by an Enumerative Method, and (5) the Leucocytes in Malarial Fever, a Method of Diagnosing Malaria Long After it is Apparently Cured, by Dr. David Thomson; (6) Note upon Yellow Fever in the Black Race and its Bearing upon the Question of the Endemicity of Yellow Fever in West Africa, by the late Sir Rubert Boyce; (7) On the Amœbæ Parasitic in the Human Intestine, with Remarks on the Life-cycle of Entamœba Coli in Cultures, by Dr. H. B. Fantham. (8) Some Further Observations on the Tsetse-fly, described in these Annals as Glossina grossa, by Professor Robert Newstead; (9) On the Correlation between Trypanosomes, Leucocytes, Coagulation-time, Hæmoglobin and Specific Gravity of Blood, by Mr. Vishnu T. Korke. 1. Dr. McCarrison gives an account of some experiments which confirm and extend observations communicated by him to the Royal Society in November, 1908. His paper has already been referred to in THE LANCET. His experiments are very comprehensive, and his conclusions are cautious and just. Indeed, he might well have claimed that he has shown that it is practically certain that endemic goitre, at least in the district in which the experiments were carried out, is due to a living organism, whereas he only claims that this is probable. 2. Captain Carter contributes a paper which is suggestive and contains descriptions of two very interesting series of experiments. He shows the existence of many similar points in

the cultural characteristics of the parasite causing the non-ulcerating oriental sore and those of another parasite which he discovered in an insect commonly found throughout India and eastwards as far as Japan. His methods are ingenious, and though he does not demonstrate that the new parasite in the insect dealt with has anything to do with oriental sore, his experiments suggest that man may probably be another host. Considering the second part of the paper as independent of the first, as in most respects it actually is, an inversion of the usual method of attacking parasitic diseases is suggested—finding the parasite first and the disease afterwards. A most original point about the paper is the way in which Captain Carter shows that this protozoon, demonstrably parasitic in a particular insect, is possibly, or even probably, parasitic in man, though not in rats and some other mammals. 3. Dr. Critien's paper on Infantile Leishmaniasis (Marda tal Biccia) in Malta, contains a number of careful observations upon this disease. His facts as to distribution and some other points, however, though numerous, are not sufficient to permit definite conclusions, and he claims no more for them than that they are suggestions as to the lines upon which further investigations are most likely to be profitable. He "puts on record" that marda tal biccia and infantile kala-azar are one and the same disease. 4 and 5. The two papers on malaria by Dr. David Thomson give in detail a large number of most laborious observations. Some of them are of undoubted value. Perhaps the most interesting is the fluctuations in the percentage of leucocytes which persist in the patient, notwithstanding ample treatment with quinine, for a considerable time, sometimes for several months, after apparent cure. The nature of this fluctuation depends upon the nature of the fever from which the patient has suffered. 6. The note upon the relative immunity of strange and native races to yellow fever in countries where the disease is indigenous, by the late Sir Rubert Boyce, is of considerable interest, particularly to students of heredity Though many may not agree with the author as to the nature of the immunity enjoyed by the native races, they will certainly welcome the facts collected and thus placed at their disposal. 7. The bulk of Dr. Fantham's paper is occupied by a useful sketch of the known parasitic amœbæ of the intestine of man and a brief but good critical review of the previous observations upon them.

New Inventions.

IMPROVED MEANS OF DILATING CERTAIN PASSAGES.

FIGS. 1 and 2 are instruments which, I submit, possess many advantages. Fig. 1 is a uterine and Fig. 2 is a male urethral dilator. Hitherto the great defect in expanding dilators was that we had no means of gauging force. Hence dilatation to desired degrees was at the expense of splitting—a heavy penalty. We cannot judge force by screws, nor is hand pressure so good as untiring gentle elastic pressure. Fig. 1 dilates the cervical canal by means of the elastic expansion of its long arms A, thus antagonising tonic resistance by tonic pressure. There is a scale not shown. The instrument is put into action after introduction by pressing the handles together to the extent desired and fixing them at that by the fly nut. B lies against the external os and affords the *point d'appui* for gauze packing to keep the instrument *in situ*, the handles being supported on a pillow. Thus tents, always a nuisance and sometimes septic, may be dispensed with. Rapid dilatation may, of course, be used. Fig. 2 is a substitute for Kollmann's dilator. The posterior half of the anterior urethra is a funnel, widest at the bulb. No instrument ever used is capable of distending this widest part to the full extent without splitting the narrow part of the funnel. No instrument satisfactorily dilates the bulb, the chief site of infiltration, worst beginning strictures, and gleet. Nor do instruments passed beyond this site distend it owing to the smallness of bulbo-membranous junction. The arm E is long, hence it extends to the extreme end of the spongy urethra. Moreover, the arrangements of the semi-bulbs of the instrument permit them to pass through a narrow meatus, thus constituting a

FIG. 1.

FIG. 2.

large distending body behind it, and a urethrometer if desired. This dilator, like the uterine, can be actuated by finger-pressure on A and B, or by screw through D; there is a millimetre scale. The character of the arms is such that while the whole anterior urethra is uniformly dilated there is no splitting. The desired expansion is fixed beforehand by the nut C, and expansion is taken to this extent or not according to the resistance conveyed to the fingers or according to the patient's sensations.

The instruments were made originally by myself, but are now made in a more perfect way by Messrs. Arnold and Sons.

Finsbury-pavement, E.C. JAMES MACMUNN.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY.—On Dec. 1st a number of ladies met at 5, Bryanston-square, on the invitation of Mrs. Ian Malcolm, to take steps for the formation of a ladies' guild. The chair was taken by Colonel the Hon. Charles S. H. D. Willoughby, treasurer of the hospital; the secretary, Mr. D. D. Kirkaldy, and the matron, Miss Catharine E. A. Thorpe, were also present, and a number of influential ladies. The chairman opened proceedings by giving a sketch of the hospital's work and by showing the service a ladies' guild would be to the hospital. The matron then entered into further details regarding the advantages of such a guild, whose subdivisions might help the hospital in obtaining gifts of vegetables, flowers, poultry, and clothing. A resolution that a ladies' guild be formed was then carried unanimously and the following officers were elected:—President, Lady Violet Brassey; honorary treasurer, Colonel Willoughby; honorary secretary, Miss Broadhurst; honorary secretary of Vegetable League, Lady Guernsey; honorary secretary of Clothing and Linen League, Miss Easton. A committee was formed consisting of Mrs. Ian Malcolm, Mrs. Ferdinand Huth, Mrs. C. A. Ballance, Mrs. Harry Graham, and the honorary secretaries.

THE LANCET.

LONDON: SATURDAY, DECEMBER 16, 1911.

The National Insurance Bill.

THE National Insurance Bill, receiving probably no modification at the hands of the House of Lords, will become law within the next few days, and the medical profession has to resolve what course should be pursued. We must recollect that no one course can be equally acceptable to all the members of a highly organised calling. In this elaborate and far-reaching measure the interests of some practitioners are affected in one manner and the interests of other practitioners are affected in a totally different manner by the same section or sub-section of the measure. The Bill is quite clear with regard to the benefits that are to be received by the insured from the medical profession, quite clear that in return for definite contributions free medical service is to be supplied, but quite vague as to the payment of those who are to supply it. For these reasons, as well as because of a too general committal of the profession to an extension of the contract system, we have always considered that the medical profession should have pointed out from the very beginning that it would be impossible to arrange a satisfactory scheme of either distribution of medical benefits or payment of medical men unless adequate time were afforded for the taking of medical opinion; especially was a proper investigation necessary of the conditions under which much medical practice was performed in this country. Such an investigation would have taken note of the capital sunk in the purchase of practices and of the income derivable in certain proportion from contract practice and in certain proportion from private patients; it would have estimated the amount of ground that a practitioner could cover in fairness to himself and in relation to his income; it would have ascertained the proper proportional number of the profession to the general population; it would have sifted the statements of those who proposed to adopt a measure for the English, Scottish, and Irish because it did (or did not) suit Germany. Such an investigation as this, made by people on whom the medical profession could rely, was wanted; for it was a revolution in medical practice and not an adjustment of our earning arrangements that was contemplated under the Bill.

But no. No stand was made by the medical profession for the necessary time in which to consider the Bill, although from the first it was clear that unless proper time was given the situation in which now we are placed would probably occur. Those in actual practice of the sort that must be affected were as little consulted as those having charge of the medical education of the country, or representing great medical corporations or great university faculties. A majority of medical men was found to believe that there was no peril in accepting the Bill in detail as well as in principle, if certain modifications were introduced. Of course, every man in this majority of medical men who demanded the recognition of what are called the six cardinal points was not solidly in favour of demanding all six points for the same reasons or with the same fervour—a weakness which could hardly fail to escape the eye of those responsible in Parliament for the passage of the Bill. The opposition to details was itself detailed. Similarly it was clear to all with experience of affairs that at least one of these six cardinal points would not be granted as such, or, at any rate, would not be incorporated in the Bill as such. But the prepossession in favour of the Bill, due to the excellent principles underlying it, no less than the excellent things in it, obscured many eyes. As the circular of the British Medical Association dated Dec. 11th, and published on p. 1726 of this issue of THE LANCET, shows, the Association decided on June 1st to adopt the policy expressed in the six cardinal points which have so often been set out. Given these points the Association decided to help in the working of the Bill, a policy which it is claimed is absolutely unchanged. Moreover, it is stated by the chairman of Representative meetings and the chairman of the Council of the Association to have been successful, in that by the efforts of the Association the Bill has now been so amended that there is no legal barrier against the profession securing the fulfilment of its entire policy as indicated by the six cardinal points. That may be so, but it would certainly require a lawyer to make this statement absolute; and we fear that any of our readers, desiring in a dispute to obtain the rights which he might thus believe to be reserved for him, would have considerable difficulty.

The position then is that a Bill, which no medical man should have wanted until it had been entirely adjusted upon professional lines and with due regard to existing conditions, will become law in a few days; that instead of such wholesale adjustment a policy of detailed amendments has been adopted by a majority of the medical profession; but that the measure is passing into law without there being any certainty that the very points are included concerning which the majority of the medical profession are, or rather are supposed to be, solidly positive. We can hardly wonder that the apprehensions of the profession are finding vent in such important meetings as that which is being held in Manchester as we go to press, and that which is announced to be held in London on Tuesday next under the chairmanship of Sir W. WATSON CHEYNE. We hope that the collective force and wisdom of these meetings—and there will be many like them—will not be dissipated in mere bewailing of the present conditions, or in resentment at any particular persons or institutions. The energies of those who promote them and those who are present at them can well be turned to action, either by the strengthening of such organisation as we have, or by the formation of some representative, if temporary, authority, which, by taking a line of independent criticism, may

reinforce medical men in all just demands, and perhaps avert some of the evils of impending agitation. A voice that can clearly have nothing to gain by pleasing any party in the Government or any section in the profession, and that cannot be accused of serving private interests, may bring confidence to many, may reconcile some of the conflicting views, and may supply that leadership which Sir ALFRED PEARCE GOULD asks for in his weighty letter in this issue of THE LANCET.

The Propagation of Plague without the Aid of Infected Rats.

"No rats, no plague," has been for some years the confident assertion of well-known experts at home and abroad. It was as far back as 1899 that Dr. P. L. SIMOND, who had been studying plague in India, laid before the Academy of Medicine at Paris his ingenious explanation of the mode in which plague was transmitted from the infected rat to man through the agency of the flea. Though at first this opinion met with some adverse criticism it has stood the test of time, and the theory he propounded in 1899 has now found general acceptance, having meanwhile been confirmed by laboratory researches, particularly those of the Advisory Committee for the Investigation of Plague in India. According to Dr. SIMOND, plague could not become epidemic in a locality until the rats had become infected. In India and elsewhere the prevailing type of the disease has hitherto been the bubonic, and although occasionally a proportion of pneumonic cases have been observed in which infection seemed to be conveyed by personal contact, they were not regarded as likely to give rise to any considerable spread of the disease. In the light of some recent events, however, it seems likely that we shall have to modify these views. In the virulent plague epidemic which devastated Manchuria in the winter of 1910–11, and which carried off more than 45,000 victims in a few months,[1] it is reported on the highest authority that during the whole course of the epidemic not a single plague-infected rat was discovered, though careful and prolonged search was made, and many thousands of these animals were examined in the affected localities by competent observers, including Chinese, Russians, and Japanese.

Recently two experts have discussed this epidemic, and each has put forward a different explanation of its rapid diffusion, notwithstanding the absence of infected rats. Dr. SIMOND, to whom we have already alluded, published an article in the July number of the *Revue d'Hygiène* entitled "L'Épidémie de Manchourie en 1910–11, et l'État de nos Connaissances touchant la Transmission de la Peste Pneumonique"; and at the October meeting of the Epidemiological Section of the Royal Society of Medicine in London a paper on Plague in Manchuria was read by Dr. REGINALD FARRAR, who was one of the British delegates at the International Plague Conference held at Mukden last April. Both of these experts are in entire agreement as to the main facts connected with the outbreak. It began in October, on the borders of Eastern Mongolia, among coolies employed in trapping the tarabagan, a species of marmot the fur of which is now in great request to imitate sable. For many years an epizootic has from time to time occurred among these animals, and lately this disease has been found to be plague. The tarabagan in past years has been hunted by the native Mongols and Buriats, but owing to the increased demand for the skins some thousands of Chinese coolies had been brought for this purpose from North China. These men were returning eastwards to their homes at the end of October last year, and some of them were attacked by plague of the pneumonic type. Crowded close together in railway carriages they travelled along the Eastern Chinese line, and as they passed through Manchuria they were joined by an immense number (not far short of 90,000) of Chinese coolies who had been employed on the Manchurian farms in the harvest of the soya bean and other crops. The Southern Manchurian Railway passes through a number of towns in the Liao-tung peninsula to Dalny (or Dairen), where the bulk of the coolies cross the Gulf of Pechili in junks or steamers to Chefoo and other ports in the province of Shantung, where plague outbreaks also occurred on arrival of the coolies. The railway carriages were crowded day after day with these men, and many of them slept at night in wayside inns where it was impossible to provide them with adequate accommodation. These coolies do not wash themselves when winter sets in, and they work and sleep in the same clothes, which soon become coated thickly with dirt. They had to sleep in the inns, packed in rows side by side, as Dr. FARRAR says, "like herrings in a barrel," in a confined and artificially warmed space, all fresh air being carefully excluded on account of the keenness of the cold. The majority of those attacked by plague in Manchuria were of this coolie class, and the epidemic area was almost entirely confined to the towns in or near the railway zone. Dr. SIMOND attributes the rapid spread of this virulent plague to the agency of human fleas. He points out that plague contracted from the tarabagan is almost always of the pneumonic form, and that plague bacilli in such cases are very soon to be found in the blood where the human flea can obtain a supply wherewith to infect other persons whom they may bite. The condition of the coolies' persons and clothing would be favourable to the flea, and the warmth of the man's dirty body would counteract the benumbing effects of the intense cold upon the insect. It is fair to Dr. SIMOND to point out that in his original communication to the Academy of Medicine in 1899 he spoke of the human flea being capable of conveying plague infection from man to man. Dr. FARRAR takes a different view, and accounts for the rapid spread of this disastrous outbreak by personal infection, the plague bacilli being sprayed into the air around the patient by the act of coughing. In view of the overcrowding of railway carriages and wayside inns during the return journey of the thousands of coolies, and considering the coldness of the weather and the exclusion of fresh air from the carriages and sleeping apartments, the conditions were altogether favourable for the conveyance of infection from a single patient to many other persons. Some of the experts among the international delegates at Mukden exposed plates in the vicinity of plague patients and succeeded in obtaining cultures of plague bacilli from the droplets coughed into the air by the sick men.

[1] THE LANCET, April 29th, 1911, p. 1152.

We do not deny the possibility of the truth of Dr. SIMOND'S contention, though he himself admits that there has been no evidence collected showing that fleas were present at all, or that they were present in any great numbers on the bodies of the plague patients or the coolie travellers. It appears to us that on the whole Dr. FARRAR'S view is the more probable one. The epidemic is admitted to have been of exceptional virulence, killing practically all who were attacked. The exaltation of the virulence of the infection may have been due, as suggested, to its being derived from the tarabagan, but it is possible the largeness of the dose of infection received by the victims may have had a share. When a patient with pneumonic plague coughs a spray of bacilli is shot into the air around him. A healthy person in the vicinity would inhale these microbes in greater number probably than they could be injected into his blood by fleas. The site also of the inoculation of the virus is important. When the infection is received direct into the respiratory tract it is likely to prove far more serious than if it had been inoculated through the skin. When the epidemic developed no provision had been made for treating or isolating the sick, and there was no sanitary administration to prevent the extension of the outbreak. It is hardly necessary to refer to the ghastly horrors that supervened, when whole households died, or if any survived they fled from their homes in panic, many of them to die on the road. The sick were left to perish untended, or were thrust out by their terrified relatives to die in the streets, where their bodies were devoured by dogs or birds of prey. All trade and commerce came to a standstill. There was no one to bury the dead; the ground being deeply frozen made this, indeed, an impossible task; the corpses accumulated in the towns till they were piled up in heaps and had ultimately to be burnt. At the end of March the outbreak ceased almost suddenly. This, Dr. SIMOND says, was due to the diminution in the number of fleas, but Dr. FARRAR attributes it to the enforcement of appropriate preventive measures. Dr. SIMOND, however, points out that these measures were unequally enforced, and that plague ceased just the same in localities where nothing had been done as in those where the authorities had acted with energy. The dispersion of the coolies no doubt reduced the amount of susceptible material; it is possible that the end of the wintry weather and the consequent elevation of the temperature led the people to admit sunshine and fresh air into their formerly ill-ventilated houses. It is, we think, very probable that overcrowding, uncleanliness, and want of proper ventilation played a part in favouring the spread of the epidemic. The serious character of the outbreak was aggravated by a combination of circumstances, among which lack of hospital accommodation, and want of sanitary and medical administration, played a part. This plague epidemic in Manchuria seems to show that plague can in certain circumstances become epidemic without the agency of infected rats. There is also the suggestion that possibly a secondary pneumonia occurring in a bubonic plague case might infect others, and that the infection "breeding true" might spread rapidly as pneumonic plague without any assistance from infected rat-fleas.

The Racial Importance of Venereal Diseases.

THE public even yet do not recognise to the full the vast importance to the community of the prevention of venereal disease. There can be little doubt that tuberculosis does not cause more than a small proportion of the pain and misery which result from venereal disease. While the members of the medical profession are well acquainted with the importance of these diseases, the general public know little or nothing of their wide prevalence or of the severity of the results which are produced. We publish on p. 1692 the concluding section of a valuable presentation of the position given in a paper by Dr. DOUGLAS WHITE and Lieutenant-Colonel C. H. MELVILLE, R.A.M.C., at the Annual Congress of the Royal Institute of Public Health held in Dublin in August last. In this paper are set forth clearly the disastrous prevalence of these diseases, not only in the army and navy of all countries, as testified by statistics, but amongst the civil population, though here the exact amount of mischief must be more doubtful. However, according to the authors and by a moderate estimate, there are in this country probably more than half a million fresh cases of venereal disease annually. This is an appalling number, especially when the consequences of syphilis and gonorrhœa are considered. The effect of gonorrhœa in causing sterility and chronic invalidism in women is only now beginning to be fully recognised, while we are ever finding more and wider extensions of the activity of the syphilitic poison. The danger is one that must be faced, and not put aside or hidden as unfit for discussion, as is the usual method in this country.

Fortunately, there is evidence of a decided diminution in the extent of these diseases amongst both the military and the civil population, and this is attributed by Dr. WHITE and Lieutenant-Colonel MELVILLE to the general improvement of moral tone and increase of sobriety, for there can be little doubt that a great amount of venereal disease is contracted during drunkenness. The question of the value of various methods for the regulation of prostitution is considered in the paper, and we are bound to agree with the authors that even in those countries where regulation has been most complete the results have been unsatisfactory. At the Brussels conferences of 1899 and 1902 the majority of the speakers were in agreement with the view that regulation had failed, for it does not succeed in preventing clandestine prostitution, by which much of the venereal disease is spread. Several continental countries have given up the attempt to regulate prostitution, and there can be little doubt that as a whole the system has failed not only to eradicate but to prevent the evils it was designed to cope with, although in certain and particular circumstances it proves efficacious. Alluding to the question of compulsory notification, the authors suggest that venereal diseases should be notified in the same manner as the other infections which are notifiable, but the objection to this idea is obvious. Notification would be followed by communication of the name and address to the authorities, and this would certainly lead to concealment by

the patient of his or her condition, and thus would be defeated the very object for which notification had been established. Yet a modified system of notification may be applicable, no names being given; by these means we should be in a position to form a clear idea of the real number of cases, and we should be able to form an estimate of our progress. This anonymous form of notification is not new, for it is already in use in Denmark, Norway, and elsewhere.

In every hospital there should be accommodation for the treatment of venereal cases, both as in-patients and as out-patients. If these means were adopted there would at first appear to be an increase in the number of cases, but before long this would be changed to a decrease. Further, the recent advances in the treatment of gonorrhœa, and even more of syphilis, can give results not hitherto attainable. The gain to the community by the diminution of these diseases would more than repay the cost to the State. Some useful suggestions for the diminution of syphilis were given in the second of the lectures by Major H. C. FRENCH, R.A.M.C., at the Royal College of Surgeons of England in November last.[1] He is in favour of confidential notification applied to both sexes; the segregation of diseased persons in hospital for a few weeks during the early contagious period of the disease; and lastly, efficient in-patient and out-patient treatment. By these means syphilis has been almost stamped out at Malta during this year. In 1909 there were 87 freshly contracted cases amongst the troops there; in 1910 there were 35; and in 1911 only three or four cases have occurred. The matter is of the first moment, yet it is unaccountably neglected by our legislators. Much may be done in several ways, but it is probable that some form of notification would be of very definite assistance. Even though it be not possible to eradicate venereal diseases, their extent can certainly be diminished, the evil, suffering, and death due to them can be reduced, and the race thus materially benefited.

Annotations.

"Ne quid nimis."

THE HEALTH OF TELEPHONE OPERATORS.

ENTIRELY apart from its humanitarian aspect, the efficiency of the worker is always a matter of the first importance to the employer. It is the part of the worker to bring to his task a bodily capacity adequate to the work to be performed, and so to direct his life that it shall not become impaired by any fault of his. On the employer it is incumbent, in the first place, not to accept candidates who can be recognised as being below the standard of capacity, and, next, to arrange the conditions of work, with a view to lessening the tax on the worker's vitality. In the case of public services of the character of the telephone service, the personal relations between the individual members of the public and the employees constitute a third important factor in the efficiency of the worker. It is satisfactory to note that, in accordance with the report of the committee of medical men appointed to inquire into the working conditions of the Post Office telephone employees, all these factors have received careful attention. The report, which was issued as a White Paper on Dec. 5th, was accompanied by a circular from the secretary of the Post Office summarising the recommendations of the committee and, for the most part, laying down the necessary steps to be taken in the proper quarters to give them effect. In the selection of candidates great care is urged to exclude such as are unfitted by markedly anæmic conditions and those of unstable nervous equilibrium. A moderate and ordinary form of anæmia, however, need not necessarily exclude, for the first of the two probationary years will suffice to enable the morbid condition to be cured if easily curable, or to establish its depreciating effect before a permanent engagement is entered on. But a sound nervous system is essential, because the telephonist is constantly using three special senses—namely, speech, hearing, and sight. This, although no injury to the senses themselves was noted, must be very wearing because of the strain on attention inherent in the work; and because the telephonist, instead of dealing, as the telegraphist does, directly with another skilled operator, deals directly with the public, "whose knowledge of the method of working," says the report, "is limited and whose methods, manner, and temper are always diverse and sometimes unpleasant. She is constantly smoothing out difficulties, and is often the subject of abuse or reproach, whilst it is necessary for her to be businesslike, tactful, and courteous under all conditions." Another strain upon her physical powers is the constant jumping up and down and reaching out entailed by her work. Of the employer is demanded consideration for the periods of work and the suitability of the head gear and breast gear. Of the three methods of allotting tours of duty at present in use the proposal to reduce the working day of continuous service from eight or eight and a half to seven and a half hours is postponed. Alternate days of long and short duties are to be abolished, and as regards "split duties," the intervals between a split attendance are to be made either as short or as long as possible. The committee's recommendation that the annual leave should be extended to 21 days is postponed. As to the gear, the committee have wisely suggested that it should always be personal to the girl herself, and that she should be permitted to wear it in any convenient fashion consistent with working efficiency. Steps, moreover, are to be taken to reduce the weight of the receiver and transmitter and to improve the accommodation provided for operators, while the suggested adoption of a rotation in the three main duties—subscribers' boards, junction boards, and trunk lines—is met by the secretary with what appear to be very weighty objections, of which not the least is the usefulness of the knowledge acquired by the operator as to the needs and peculiarities of individual subscribers. The report cannot, of course, deal effectively with the third factor in the induction of ill-health in the telephone operator, especially nerve-strain—namely, the behaviour of the public. It is to be hoped, however, that the widest publicity will be given to this point, in order that it may be instilled into the public mind that forbearance, lack of irritability at slight mistakes, and courtesy may do much to mitigate the rigours of a very trying service which in these days we could hardly get along without.

COLD BATHS IN DISEASES OF CHILDREN.

IN the *Canadian Practitioner* for November Dr. James Newell has published a paper, read at the last meeting of the Ontario Medical Association, on the value of the cold bath in the treatment of diseases of children. We noticed last year a paper by a South African practitioner, Mr. M. G. Pearson, advocating in infantile convulsions, instead of the usual warm bath, a cold bath, on the ground that convulsions are due in all cases to pyrexia.[1]

[1] THE LANCET, Nov. 18th, 1911, p. 1389.

[1] THE LANCET, July 16th, 1910, p. 180.

He reported several cases in which this treatment proved most successful. He has found the treatment equally successful in prevention. He is in the habit of telling the parents of acutely ill children that there is no fear of convulsions as long as the temperature is under 102° F.; that above 103°, no matter what the illness, there is extreme danger of convulsions; and that the temperature should be watched and, if necessary, reduced by bathing. He compares convulsions to the boiling over of a kettle, which is preventable by similar means. In a correspondence which followed[2] the value of this method was confirmed. For over 30 years Dr. Newell has employed the cold bath as a favourite treatment in children's diseases attended by a high temperature and irritability of the nervous system. When a child is in convulsions, rigid, and stertorous, with a temperature of 104° or 105° F., he finds that the happiest results are obtained from a cold bath of 75° or 80°, followed by affusion of cold water to the head, and supplemented by friction of the limbs and body, till the rectal temperature drops to 100°, when the child is removed from the bath and wrapped up, with hot-water bottles applied to the extremities if they have become blue and cold. The treatment is similarly useful in the acute febrile attacks of children with rapid rise of temperature and nervous twitchings, of which the cause may be unknown. Dr. Newell recommends this treatment as preferable to administering the coal-tar antipyretics, which are apt to be followed by cardiac and nervous depression as well as by destruction of hæmoglobin. The cold bath, on the contrary, has a stimulating action on the heart and respiration, producing an increase of blood pressure and deeper respirations. Oxidation processes, diuresis, and other metabolic changes are increased and the number of red blood corpuscles rises.

"THE EXTERNAL MALLEOLAR SIGN."

IN the *Interstate Medical Journal* for July and October Professor C. G. Chaddock, of St. Louis, has described a new sign of organic disease of the spino-cortical reflex paths, which he terms "the external malleolar sign." It somewhat resembles Babinski's sign, but seems to have certain advantages of its own. It consists in extension of one or more or all of the toes, with or without "fanning," when the skin below the external malleolus is irritated. It can almost always be obtained when Babinski's sign is present, and, on the other hand, it occurs when Babinski's sign is absent, and then it is a reliable sign of organic disease of the central nervous system. Professor Chaddock has found it present without Babinski's sign in fracture of the skull, transitory unilateral cerebral lesions, old hemiplegia, general paralysis, and lesions of the cord. He never found it in peripheral lesions or in pure tabes. He has seen it develop alone to be joined by Babinski's sign and persist after Babinski's sign has passed away. The external malleolar sign is obtained as follows. The patient lies in bed on the back, with the lower limbs relaxed and extended. If possible, especially in doubtful cases, the limb to be tested should not be compressed or touched in any way except at the point of application of the stimulus. The sign may also be tested with the patient sitting in a chair and the limb resting on the knee of the examiner, who sits at a convenient distance. Irritation of the skin is best performed with a rather dull steel point. In the groove which outlines the external malleolus the point is drawn from behind forwards until the depression between the malleolus and cuboid is reached. This depression seems to be the most excitable point. The irritation should be varied from slight stroking to rather severe scratching with considerable pressure, but it is never necessary to abrade the skin or cause pain. Normally this stimulus causes no movement whatever of the toes, but it may cause reflex contraction of the muscles of the thigh like that produced normally when the sole of the foot is irritated. The abnormal reaction consists in extension or fanning of one or more or all the toes. In a few cases Professor Chaddock has observed a movement of flexion, and in these there was organic disease of the central nervous system. He therefore considers that flexion has the same pathological significance as extension. Care must be taken not to confound voluntary movements of the limb to escape the irritation with those excited reflexly. A striking peculiarity of the external malleolar sign is the fact that with a unilateral Babinski's sign it is the rule to find it on both sides. Often two toes—for example, the second and third—are extended together, the others remaining unmoved—a movement almost, if not quite, impossible voluntarily. Fanning of the small toes, without extension of the great toe, is likewise practically impossible voluntarily. So also is abduction of the little toe, the others remaining unmoved. Other peculiarities which mark the abnormal movements are the uniformity of the response with repeated application of the stimulus, their production from a definite skin area, most frequently from the depression mentioned, and an electric-shock-like quality. Movements of escape from unpleasant irritation occur indifferently from other areas. The following are some examples of the external malleolar sign. A youth, aged 20 years, fell from a wagon on the right side of his face on August 23rd, 1911. He was unconscious from the time of the fall until the morning of August 27th, when his pulse was 54 and his temperature normal, and he complained of severe unlocalised headache. Both eyes were black, the pupils were normal, and the deep reflexes were normal with a slight indication of ankle clonus. Babinski's sign was absent, but infra-malleolar irritation caused extension and fanning of all the toes on both sides. He became worse, and on August 30th the temperature was 101° F. Babinski's sign was present on the right side, and there was paresis of the left side of the face. Because of the presence of Babinski's sign on the right side, left subtemporal decompression was performed on the 31st, and scarcely any increase of tension was found. Right decompression was then immediately performed. Great pressure with subdural blood was found and drainage was established. The patient was immediately relieved, the pulse rose to 72, and Babinski's sign disappeared, but the right external malleolar sign persisted. A man, aged 38 years, with a history of syphilis, was mentally disturbed and suffered from severe headache. There were Argyll Robertson pupils, of which the left was the larger, double slight ankle-clonus, the external malleolar signs on both sides, and normal plantar flexion on irritation of the toes. He improved under mercury but remained demented, and died in a cerebral seizure. The necropsy showed softening of the left temporal lobe and of all the white substance of the right hemisphere.

[2] THE LANCET, Sept. 17th (p. 912) and 24th (p. 975), 1910.

SUBLUXATION OF THE PENIS.

TWO cases of this rare form of injury having come under his care within two months, Major N. R. J. Rainier, I.M.S., has recorded them, with brief notes of five others alluded to in the literature, in the *Indian Medical Gazette* for November. His reason for doing so is that he considers the description of the injury found in text-books potentially misleading. His first case was that of a boy of 14 who had been gored in the perineum by a bullock. The scrotal raphé was lacerated and both testicles were prolapsed. These were cleansed and replaced, the wound was sutured, and 8 ounces of bloody urine were withdrawn by catheter. Three days later pain was experienced in passing urine,

and it was found that urine was issuing from the wound (which had broken down) as well as from the apparently normal penis. Closer examination showed that the "penis" consisted only of a sheath; the glans penis, which was lying above and behind the testes, was drawn down into this sheath, to which it was accurately stitched after removal of the foreskin. Four years later the cure proved anatomically and functionally satisfactory. A second case, occurring in a lad of 16, was also attributed to the onslaught of a bullock, but in this instance the very improbable story given was that the animal had gored him through the foreskin, the penis disappearing at once. In this case also the penile sheath was empty, the body being felt as a firm object at the scrotal junction. The displacement was reduced and the penis retained in position by strapping, a device which seems to have been successful. The point to which Major Rainier draws special attention is the condition of the empty sheath: he says that it feels like a thickened piece of small bowel. In all the cases cited by him the displacement of the body of the penis was apparently overlooked at the first examination. In recent cases the treatment is replacement with or without incision, while in cases of some standing a plastic operation may be necessary. Apparently the results are satisfactory as a rule.

"THE SURGEON'S LOG."

BOOKS of travel are many and of various excellence. At the one end of the scale come such works as "Eothen" and "The Monasteries of the Levant," to say nothing of Herodotus. At the other—but they are many, and it is kinder not to particularise. This book by Dr. J. Johnston Abraham is certainly one from the right end. Dr. Abraham not merely sees but observes. Having travelled as surgeon on a high-class tramp steamer to the Far East, to Singapore, Japan, Java, Celebes, and home again, he gives us in "The Surgeon's Log"[1] the results of his observations and impressions, written in easy, pleasant English, with an alert sense of humour, and the eye of an artist. Everyone who is blessed with any imagination feels the effect on the mind of the great spaces of the desert and the sea. "When we laughed we laughed softly, for the feeling of immensity was over us," says Dr. Abraham, in recounting his feelings at the sight of the desert from the Suez Canal, "and we could intuitively understand how, nurtured in such great vastnesses, the Semitic mind had risen above the futile polytheism of the Greeks, and evolved the grand conception of a vast, omnipotent, omniscient, and omnipresent God, with its necessary corollary, 'there is no God but God.'" And here is a picture of sunset in the Canal. "Slowly the Turneresque effect rose to a climax, until the sinking sun touched the rim of the horizon, sank rapidly, and disappeared; and then as if at the touch of a wand, the gold, the rose, the blue, the green, melted to all the shades of grey, a little breeze sprang up from nowhere, and the soft mantle of night swept in layer after layer across the sky." Dr. Abraham records but little of his medical experiences—very possibly there were none worthy of special mention; but his impressions of the places visited, of the scenery, the peoples, the trade, the political possibilities of the Dutch East Indies, the fishes, animals, birds, and flowers, are all set down in a simple and yet vivid manner. His comparison of Chinese honesty with Japanese subtlety—we mean in the commercial field—is judicially set forth. We do not know if it is still so to-day, but certainly a decade or two ago Chinese clerks were largely employed in the banks and counting-houses of commercial firms in Japan. Dr. Abraham's explanation thereof, together with his prophecy that in the future the one nation will become as honest as the other, is convincing. The author seems to have been most fortunate in his shipmates, who are all drawn with a loving hand, especially the chief engineer, a worthy peer of Kipling's MacPhee, while the captain must have been a delightful person and one, moreover, who knew a good dinner. Dr. Abraham's description of the Javanese "rijst-tavel" calls forth a sigh for the East, the deeper if one has been there already and "hears the East a-callin'" with its mysteriously seductive voice. "The Surgeon's Log" will doubtless prove enjoyable reading, more especially to those members of the medical profession who have made one or more voyages as ship's surgeon—a life that is not without its delights, particularly on the oriental and southern routes. Dr. Abraham talks of "one bell" as being sounded at 11.45 P.M. and 5.45 P.M. We thought that "bells" are sounded only at the hours and half-hours, not at the quarters, "eight bells" being at the hours of 12, 4, and 8.

[1] The Surgeon's Log. By J. Johnston Abraham. London: Chapman and Hall, Limited. 1911. Pp. 338. Price 7s. 6d. net.

PERFORATION IN INTESTINAL TUBERCULOSIS.

ALTHOUGH intestinal ulceration is a common complication of chronic pulmonary tuberculosis, perforation has seldom been observed. In the *American Journal of Medical Sciences* for November Dr. John M. Cruice has published an important paper on tuberculous perforation of the intestines, the result of a study at the Henry Phipps Institute. Of 475 necropsies on the subjects of pulmonary tuberculosis he found intestinal ulcers in 313 (65·9 per cent.). In 13 (2·7 per cent.) there was perforation. Of these, 10 were "complete" and 3 were "incomplete" perforations. This distinction was introduced by the late Dr. Samuel Fenwick, who defined the former as perforation directly into the peritoneal cavity causing either acute peritonitis or local abscess, and partial perforation as cases in which adhesions had formed with some coil of intestine before the ulcer had perforated. There is, therefore, no extravasation of fæcal matter and no acute general peritonitis. Sometimes ulceration takes place through the adherent coils of intestine, forming a fistula. Dr. Cruice's cases of complete perforation occurred in equal numbers in both sexes, and the average age of the patients was 32½ years. The small intestine (generally the ileum) was the seat of perforation in 6 and the large in 4. In 2 cases there were 2 complete perforations, and in 1 case 4. Of the perforations in the large intestine, three were in the appendix and one in the head of the cæcum. In one case the appendix had completely ulcerated off at the tip, and in another there was a perforation at its base. In tuberculous perforation of the intestine the symptoms so characteristic of perforation of the stomach or intestines in general are seldom present, and therefore the condition is not diagnosed. In 4 of the 10 cases they were fairly typical. Thus a woman, aged 33 years, suffering from pulmonary tuberculosis, was admitted without any abdominal symptoms. A week later diarrhœa began, and a fortnight after this she complained of marked abdominal pain. The abdomen was distended, rigid, and tender on the left side. On the next day she was collapsed, with the abdomen greatly distended, tympanitic, hard, and painful, and the diarrhœa was severe. On the following day her face was pinched, she was extremely weak, but was free from pain and the diarrhœa had stopped. She died that evening. The necropsy showed a perforation of the ileum and purulent peritonitis. On the other hand, the symptoms may only suggest the possibility of perforation. Thus a woman, aged 35 years, suffering from pulmonary tuberculosis, was admitted with diarrhœa. One day her temperature became subnormal, her pulse more rapid, and she lay in a state of stupor. The diarrhœa stopped, her mind became clear, but she died a few days later. The necropsy showed a perforation of the cæcum and acute peritonitis. In

another case a woman, aged 22 years, with slight diarrhœa one day complained of abdominal pain. On the next day the pain was severe and accompanied by a slight fall of temperature, but no change in the pulse-rate, which was previously high. On the eighth day after the onset of the pain she died. The necropsy showed 2 perforated ulcers at the lower part of the ileum and acute peritonitis. In 5 cases the symptoms were most indefinite; in 2 there were absolutely no abdominal symptoms, in 1 the only abdominal symptom was pain; in 1 there were pain, tenderness, and rigidity, with slight change in temperature and pulse. When it is remembered that all these symptoms may occur in cases of tuberculous ulceration of the intestines, with perhaps some localised peritonitis but without perforation, it will be realised how difficult or impossible it may be to diagnose perforation. Partial perforation is not a matter for clinical observation; it is merely observed post mortem.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

A MEETING of the Governors and General Council of King Edward's Hospital Fund was held on Dec. 11th at St. James's Palace under the chairmanship of the Speaker of the House of Commons, for the purpose of awarding grants to hospitals and kindred institutions. The treasurer reported that the amount received to date by the Fund for general purposes, less expenses, was £176,745. The Distribution Committee has apportioned £151,000 to be distributed among 105 London hospitals—£1000 more than in 1910. The chairman, in moving the adoption of the various reports and awards, read a letter of congratulation from the King, and announced with regret the resignation of Mr. F. M. Fry from the post of joint honorary secretary.

ACUTE POLIOMYELITIS AND CEREBRO-SPINAL FEVER.

THE attention of the Local Government Board has been drawn to the recent occurrence in this country of several local outbreaks of acute poliomyelitis. Some of these outbreaks, which have been chronicled in our columns, have been made the subject of detailed investigation by medical inspectors of the Board, and their reports, says Sir Horace Monro in a recent circular letter to sanitary authorities, will shortly be issued, together with a summary of the history of the disease, and an account of its pathology. Sir Horace Monro's memorandum shows that at the commencement of these outbreaks some difficulty was experienced in the diagnosis of the disease, owing to the similarity of its symptoms and those of cerebro-spinal fever. The mortality is comparatively high amongst persons attacked by either of these diseases. In cerebro-spinal fever the majority of those who survive an attack recover their normal health after a prolonged and tedious convalescence. In acute poliomyelitis, which occurs in children, and less frequently in adults, a very large proportion of the survivors are left disabled, in greater or less degree, by muscular paralysis. "It is," says the memorandum of the Permanent Secretary of the Local Government Board, "desirable, in the interest of the public health, that both diseases should be made notifiable, in order that the council and their medical officer of health may be informed as soon as possible of the occurrence of cases of these diseases. It will thus be practicable to initiate prompt inquiry into their origin and incidence and to take any precautions necessary to prevent their spread." In several districts acute poliomyelitis and cerebro-spinal fever have already been made notifiable; where this has not already been done the Board suggests that the authority should take steps at an early date to require notification. The circular is accompanied by memoranda from Dr. A. Newsholme, medical officer to the Board, on cerebro-spinal fever and acute poliomyelitis. These memoranda contain in a succinct form all the information available for the diagnosis of the conditions and the prevention of their spread.

IN addition to the Durbar Honours, which will be found in another column of this issue, the Kaisar-i-Hind Medal of the First Class has been conferred upon Dr. Herbert F. Lechmere Taylor, of the Church of Scotland Mission, Jalalpur, in the Gujrat District, Punjab, and in charge of the Jalalpur Hospital; on the Rev. John Cameron Young, M.B., C.M. Glasg., medical missionary of the Keith Falconer Mission at Sheikh Othman, Aden; and on Dr. Raghavendra Row.

WE regret to announce the death, on Dec. 11th, of Dr. Edmond Fauriel Trevelyan, of Leeds, a leading Yorkshire physician and formerly professor of therapeutics in the University of Leeds.

IN connexion with the impending reorganisation of London public health administration under a single authority, we understand that proposals are being considered by committees of the London County Council for the appointment of six whole-time permanent medical officers to carry out work relating to medical inspection and infectious diseases. The appointments are being made with a view of securing coöperation with the medical officers of health of the metropolitan borough councils. A further official will superintend the work of the new officers.

THE HEALTH OF THE NAVY FOR 1910.[1]

FOR many years, and until quite recently, the statistical reports of the health of the navy had been little but a series of dull tables of figures, with the minimum of comment to explain or make them interesting; but when Sir James Porter became Director-General the report for 1909 was enlarged, excerpts from the original journals of medical officers were again published, and the book became once more of great value to the student of naval hygiene. A further improvement is made in the number for 1910, as one of the staff at headquarters has written an article "On the History of Beriberi as it has Occurred in the Persian Gulf Squadron," an article discussing, with the fullest knowledge of all the epidemics in the last 12 years, the incidence of the disease and the theories of its origin which have been put forward in the service. Such papers are of great value and should take, in tropical medicine and geographical pathology, the place filled in relation to the public health of this country by the reports of the inspectors of the Local Government Board.

Divisions of the Naval Force.

Anyone who spends time in considering the report for 1910 will see that the naval force, as arranged in the tables, falls naturally into three groups: the Home Fleet of 50,000 men, the Home Station of 25,000, and the remainder the fleets abroad, aggregating 40,000. Of these, the Home Station shows the greatest percentage of sickness, the average loss of duty through illness being 13¼ days. We may very well find an excess of sickness in this group, as it contains both extremes of naval life; at the one end boys and new entries, at the other the older men who are not being sent abroad as they are just about to take their pensions. The smallest sick lists are shown by the great Home Fleet, whose men averaged only 8¾ days' illness in the year; the men abroad have 9¼ days on the sick list, and besides a greater chance of death than the men in the other groups. Some will be surprised to hear that statistics indicate service abroad to be healthier than service at home, and to learn that the men of the Home Fleet in the "cold and stormy home waters" show the least illness of all. Too much stress must not, however, be laid on these figures, for these are

[1] The Health of the Navy for 1910. London: Wyman and Sons. 1911. Pp. 200. Price 1s. 1d.

only crude sickness rates, uncorrected for age distribution. As death-rates vary with age, so also do sickness rates, but there is nowadays no statement in the health report of the navy about the age constitution of the various groups.

Proportional Incidence of Disease in the Royal Navy in 1910 (Ratios per 1000).

—	A Training establishment.	B Home Fleet.	C Fleets abroad.	D Home Station.	E Total force.	F Marine headquarters.
Number in group	2528	9,000	37,560	26,950	113,530	6180
Cases	1008	573	675	771	653	662
Invalids	20·9	—	—	—	15·4	—
Deaths	3·2	2·5	4·1	2·9	3·1	3·4
Sick daily	38·0	24·0	25·0	36·0	27·0	25·0
Days of service lost to each man through illness	14·0	8·8	9·3	13·3	10·0	9·2
Pneumonia	9·9	4·0	3·2	7·5	4·6	2·4
Tubercle	—	2·1	2·4	2·4	2·3	2·6
Catarrh, sore throat, tonsillitis	—	82·0	76·0	169·0	105·0	—
Rheumatic fever	46·0	7·1	7·3	12·7	8·5	1·6
Enteric fever	—	0·8	1·7	1·4	1·4	0·97
Appendicitis	—	2·3	2·9	2·2	2·5	—
Venereal diseases	—	110·0	109·0	144·0	119·0	79·0
Injuries	104·0	144·0	156·0	111·0	140·0	166·0

Column A is included in Column D. Column E is the sum of Columns B, C, and D. Column F is not included in Column E.

The report deals with a "total force" of 113,530 men amongst whom occurred 74,253 fresh cases of disease or injury, of whom 358 died and 1747 were invalided out of the service. There were, on the average, 3124 men always on the sick list, rather less than half of them sick on board their ships or at their homes on leave, and rather more than half of them in the hospitals (515 daily average at Haslar, 435 at Plymouth, 387 at Chatham). The "total force" as stated above does not, curiously enough, account for all the men, for an extra group of 6180 "marines at headquarters," not included with the others, has a little table all to itself at p. 149.

Improved Health of the Fleet.

The improvement which is being made in the health of the fleet by diffusion of knowledge of sanitation, the building of better ships, the better selection of recruits, and by modern advances in the treatment of disease can be well shown by comparing the figures for 1910 with those of 10 and 20 years ago.

Year.	Total force.	Per 1000. Cases.	Invalids.	Dead.	Sick daily.	Days of service lost by each man by illness.	Days under treatment. Each case.
1890	53,350	1063	26·18	8·54	42·3	15·5	14·5
1900	95,830	882	35·83	7·27	37·6	13·7	15·5
1910	113,530	653	15·38	3·15	27·5	10·0	15·3

We can see from the figures that hygiene must be improving and skill in treatment increasing. There is definite evidence of improving surgical skill among the medical officers of the navy and of increased confidence by the men in their skill, for in 1900, 73 operations are reported for radical cure of hernia, and 532 were done in 1910; further, in 1900, 239 men were invalided for hernia, of whom "the greater number," at least 120, had refused operation, but in 1910, of the 82 who were all that were invalided for this disorder only 31 had refused operation.

Incidence of Different Diseases.

The total sickness is much the same as in 1909, but we notice that pneumonia has increased in the Home Fleet, where there were 196 cases (30 per cent. increase), 2 invalids and 19 deaths. No explanation is offered of the greater prevalence. We observe also that invalidings in the first year of service have increased very materially (p. 15) from 166 to 286. The chief increases were: nervous diseases, 39 (against 17 in 1909); diseases of the ear, 37 (against 17); diseases of the circulatory system, 87 (against 20). Rheumatic fever, 7 (against 22), shows a decrease; it is uncertain if this is a real decrease or due to transference of cases with heart disease to the class of circulatory diseases. So considerable an alteration in the rate of invaliding should surely, if noticed, have evoked some explanation. Further, we should have liked to hear why there is such excess of morbidity in the training establishments (p. 150). The pneumonia rate is double, the rheumatic fever rate five times, those obtaining in the navy generally. No account of the health of the cadets at Osborne or Dartmouth, of which so many people have been asking questions, can we find anywhere. Probably it will be included in the report for 1911.

A considerable epidemic of mumps is reported from Australia; 84 cases occurred in one ship of 425 men. There was no special prevalence of influenza in any one ship this year. A very large number of the cases of influenza occurred among men at home on leave; it is questioned if the diagnosis was always correct (p. 20); all 4 deaths occurred in men away on leave.

Enteric and Mediterranean Fever.

The cause most frequently assigned for enteric fever is the eating of infected shell-fish. One fleet-surgeon (R. D. Jameson) traced a case to a shop in a distant town and found that shop already suspected by the medical officer of health there. H.M.S. *Swiftsure* and H.M.S. *Scylla* still went on having cases of enteric fever. H.M.S. *Swiftsure* had 12 cases last year and 9 in January, 1910; 2 more developed in August and 2 in November. No cause, not even drinking shore water or eating green vegetables that may have been infected, is suggested, but the report says: "It is somewhat suggestive that a ship so badly infected should continue to contribute cases," which seems to indicate that if cases go on appearing this year in the ship it may be officially declared infected, and then something will be done. There is talk of a carrier perhaps being the cause of the infections on H.M.S. *Scylla*, but it is not stated whether measures have been taken to discover him clinically or bacteriologically. No cases of paratyphoid fever are mentioned.

One officer contracted Mediterranean fever in China, having drunk raw goats' milk when passing through Malta. Thirty men are daily doing drill and otherwise learning their work in the Mediterranean Fleet who, but for the work of Sir David Bruce and sanitary regulations founded upon it, would be aching in hospital instead.

Pneumonia.—Malarial Fever.—Tuberculosis.

Pneumonia (519 cases) has increased; cases come in groups from individual ships—7 from *Vanguard* at Berehaven between April 23rd and May 10th. No remark is made about the increase. It would be well if whenever a case occurred the cubic content of the apartment and the number of men sleeping in it could be noted, and with that the area of inlet and outlet ventilation. These could be tabulated later, and in that way much would be learned. Pneumonia in ships is so often a disease of overcrowding that when a case is reported and overcrowding is not definitely disproved at once, it is hard not to suspect that it exists. 321 cases of malarial fevers occurred in the East Indies, but no word is said of the methods of prevention that were or might have been taken, and of their proportional success. Of 611 cases in the service only two died.

260 cases (2·44 per 1000) of tuberculosis occurred, of whom 205 were invalided and 26 died. Marines seem to suffer most. 65 are daily on the sick list through tubercle, and 231 were lost by it to the navy in 1910. The real totals are probably a trifle larger than the figures, as cases of hæmoptysis, broncho-pneumonia, and phthisis are still reported under other headings. 208 were lung cases, 12 in joints, 7 in glands, 5 genito-urinary, and 2 in the skin. The greatest number of cases reported from any individual ship was 5.

Venereal Diseases.

Under venereal diseases there were 13,402 (118·03) cases, 148 (1·29 per 1000) invalidings, and 6 (0·22) deaths. One-third of the sickness of the service is shown as due to venereal disease, but some cases of locomotor ataxia and

general paralysis of the insane are reported merely as nervous diseases, and there should also appear under this heading some of the cases of aneurysm, stricture, and suicide. Three cases of syphilis insontium are mentioned (pp. 42, 76, and 88). Twelve cases of venereal disease occurred for every 100 men, and roughly, 2 were chancroid, 1 primary syphilis, 3 were secondary syphilis, and 6 were gonorrhœa. These diseases are apparently lessening. About 1890 there were 6 cases of sores, 2 of secondary syphilis, and 8 of gonorrhœa, 16 cases in all, to 100 men. Venereal disease has thus lessened in 20 years, 3000 cases being saved in a year—a vast improvement.

Rheumatic Fever.—Parasitic Diseases.

In rheumatic fever (969 cases) there was a considerable increase, but it appears that ordinary muscular rheumatism is this year counted with rheumatic fever. The disease is specially prevalent on the Home Station, particularly in the training establishments. It is suggested that this disease (p. 8) is due to climate and the severity of service at home, but more cases are reported from abroad than from the Home Fleet. Of parasitic diseases, there were 3135 cases of scabies in 1910, a reduction of 429 cases, or 2·9 per cent. In the Japanese navy of 40,000 men there were, in 1907, 337 cases reported, or 8 per 1000. In the American navy of 57,000 men there were, in 1909–10, 316 cases; and in the German navy of 50,000 men (1908–09) there were 570 cases of infection by animal and vegetable parasites.

Beri-beri.—Defective Teeth.—Non-venereal Bubo.

Much attention is being paid in the navy to beri-beri, which has given lately a good deal of trouble in the Persian Gulf. In 1910 it attacked 22 Europeans. A full clinical account of these cases would be of interest. Two papers on beri-beri are in the appendix: one is by Fleet-Surgeon R. C. Munday (p. 179) dealing with prevention and treatment. He recommends the mungo or katjang-idjoe bean (phaseolus radiatus). We have recently mentioned its value in this connexion.[2] The number invalided in 1910 for defective teeth is only seven; in 1909 the navy lost 122 from this cause, but unfortunately no explanation of the improvement is given. There were 327 cases of non-venereal bubo, an important disease, for it occurs on the China and Cape of Good Hope stations, and is reported to be related to plague. A paper in the appendix to the report for 1911 discussing the pathology and treatment of this disorder would be very welcome.

Local Diseases.

As to local diseases, the highest death-rate and the highest invaliding rate are associated with diseases of the circulation. How many of these are due to rheumatic fever we cannot say completely, but it accounted for 30 per cent. of the 262 who were invalided for organic heart disease. The largest daily loss of service is from diseases of the digestive system; half of these cases are sore-throat and tonsillitis. There were 280 cases of appendicitis, which seems to be more prevalent in the American and German navies, but less frequent in the Japanese.

Great Improvement in Diseases of the Lungs.

It is a little difficult to compare the loss from respiratory diseases and from tubercle now and formerly, as cases have been sometimes returned under one head and sometimes under another. If, however, we add together the respiratory and tuberculous figures for 1890 and those for respiratory and tuberculous disease and for pneumonia in 1910, we shall get a very fair idea of the improvement which has occurred. The figures are:—

Respiratory and tuberculous diseases.	1890.		1910.	
Cases per 1000	82		74·5	
Invalided per 1000	4·1	waste 5·7	2·3	waste 2·9
Deaths per 1000	1·6		0·6	

They show that the waste of the service (deaths and invalids) has been halved in 20 years, an enormous advance.

Accidents.

We must not neglect to mention a suggestive note by Fleet-Surgeon E. B. Pickthorn on the influence of care and forethought in the prevention of accidents (p. 47). That principle applies in exactly the same way to the prevention of disease, as medical officers must show to the executive officers with whom they serve.

Compressed Air Illness in Diver.

The most striking story in the appendix is that of the diver who came up too quickly from a depth of 16 fathoms and was consequently attacked with cramp, headache, and nausea. Fleet-Surgeon R. S. Bernard got him quickly back into his diving dress and sent him down immediately to 12 fathoms to get him again under pressure. The man was now 72 feet down below his medical adviser, was all alone, and could only be communicated with by telephone—an anxious position for both patient and physician. In ten minutes the patient began to improve and was allowed to make his way slowly to the surface, and when he reached the top at last in 40 minutes he was found to have recovered. The other papers in the appendix are also of great interest.

[2] THE LANCET, Dec. 2nd, 1911, p. 1570.

THE LONDON COUNTY COUNCIL AND THE CARE OF THE FEEBLE-MINDED AND INSANE.

AN interesting debate took place at the meeting of the London County Council on Dec. 5th with regard to questions of recurrent insanity and the care and control of the feeble-minded.

Report on Deputation to the Home Secretary.

The General Purposes Committee reported that a deputation from the Council had waited upon the Home Secretary to urge that legislation should be promoted to deal with the whole question of the care and control of the feeble-minded, and particularly to confer on the Council authority to make provision for persons lacking in moral sense.[1]

The Home Secretary, in his reply to the deputation, said that both he and the President of the Board of Education were deeply interested in the subject and in securing a remedy very much on the lines asked for by the Council. He had in draft an Inebriates Bill and also the heads of a Bill for dealing with the feeble-minded, both of which he trusted would become law next session. Mr. McKenna added that the last-named Bill would be compulsory and not adoptive, and provision would be made for the care, after the age of 16, of feeble-minded children and for the care of imbeciles. Further, the Home Office was in entire agreement with the Council's contention for the establishment of a central authority. As regards the question of the treatment of inebriates, he foreshadowed legislation whereby magistrates would be enabled in every case to commit a habitual inebriate to receive reformatory treatment, and he indicated that assistance from the Treasury might be expected towards the establishment and maintenance of reformatories. As regards the question of the care and treatment of lunatics in their relation to the feeble-minded, the Home Secretary pointed out that the establishment of a central authority would trench upon, and he hoped relieve, the burden of dealing with lunatics.

The President of the Board of Education (Mr. Pease) addressed the deputation on the question so far as it related to the education service, and referred to the necessity of making compulsory the operation of the Elementary Education (Defective and Epileptic Children) Act, 1899, and of educating the feeble-minded children in every district, thus reducing the number of adult cases to be dealt with.

This report was received without comment.

Recurrent Insanity and the Propagation of the Unfit.

A discussion, however, took place subsequently on the report of the Asylums Committee already mentioned in THE LANCET.[2] This report had reference to a lunatic who had been in and out of Banstead and other asylums 26 times and had had 13 children, two of whom had shown signs of insanity. In giving the details the committee merely said: "It seems a striking illustration of the need for legislation to prevent the increase of the unfit," and made no definite recommendation.

Mr. A. O. GOODRICH, chairman of the Asylums Committee, said this was one of the cases of recurrent insanity in regard

[1] THE LANCET, April 29th, 1911, p. 1164, and Dec. 10th, 1910, p. 1717.
[2] THE LANCET, Oct. 28th, 1911, p. 1222.

to which the committee was anxious to do something practical. The problem of constant readmissions was causing those responsible for the London County Asylums a great deal of anxiety. At present, although the committee very well knew that in many cases there was every probability of a patient returning, no power existed by which they could detain a patient who had recovered. Members of the Council might be astonished to know that between 1885 and 1910 no less than 29 per cent. of the patients discharged were readmitted into London County asylums. He would be asked what practical suggestion he had to make; this was, however, a very difficult matter, and therefore the committee had not made a definite recommendation. There were various ways of dealing with the problem. One suggestion was segregation; in this direction the Eugenics Society was doing noble and good work, and was promoting a Bill in Parliament to deal with the question; he hoped the Council would support them. A method was by colonisation; a number of the insane of one sex would be put on an island and kept there practically for life. Another method was by means of surgical operation—of course, under proper safeguards. They knew on the excellent authority of Dr. F. W. Mott the hereditary character of mental deficiency. Nearly all the patients of this class had relatives who were, or had been, insane. He believed the whole of the committee was united in thinking that some form of State control should be exercised in cases of recurrent insanity.

Mr. EDWARD SMITH thought that on this important subject the Asylums Committee should have presented a more exhaustive report and have made some definite suggestion. Mr. Goodrich touched on very dangerous ground when he suggested that because a young woman became insane and entered and left an asylum three or four times she should be taken from her family and all her associations and placed on a remote island. He had known cases which had become permanently cured after three or four entries into an asylum.

Sir JOHN MCDOUGALL: What about the next generation?

Mr. SMITH said that he was content to deal with the present generation. This subject ought not to be discussed by the County Council, but by another body with power to take definite action.

Sir JOHN MCDOUGALL welcomed the report as calling public attention to a serious peril that lay before the nation. It required very careful consideration before any practical suggestion could be made. He mentioned a case of a woman who had been in an asylum before she was married. She had had five children, and one daughter, aged 17, was in the same asylum. The problem urgently required attention. Dr. Mott was making very strenuous inquiries and obtaining the most exhaustive statistics. At present there was no power to prevent the propagation of the unfit.

Mr. H. H. GORDON said that no one reading the report of the Royal Commission on the Feeble-minded could fail to be struck by the number of cases of women coming to workhouses year after year to give birth to incapable and degenerate children. It was not kindness to allow women to go out into the world and be subject to temptation, which owing to their feeble-mindedness they were unable to resist. It was not fair to them and the rest of the community to allow them to give birth to children who invariably proved to be feeble-minded. They deplored a falling birth-rate among the physically fit, but took no steps to try to prevent the propagation of the unfit. As to sterilisation, he was told that the religious conscience of the community would be against such a course. If this was considered the only effective method of dealing with the problem, then the religious community must be asked to say how else it was to be solved. The present state of things could not go on indefinitely, and he trusted the Asylums Committee would bring forward case after case of the kind presented in this report, and that they would be published widely all over the kingdom in order that public opinion might be educated.

Mr. E. G. EASTON said that Dr. Mott had such cases by the score. After referring to the growing cost of asylums, Mr. Easton declared that the Asylums Committee could not have taken more definite action because the medical profession hesitated to express itself as strongly as many laymen desired.

Mr. H. C. THOMAS quoted a medical authority as saying that of the inmates of asylums 32 per cent. were there through worry alone and 26 per cent. through excessive alcoholism, largely due to the conditions under which they lived. The following remedies had been suggested:—A living wage; insurance against sickness and unemployment and provision for old age; the abolition of slums and overcrowded areas; and the encouragement of the family and family life. It was encouraging to think that such a considerable proportion of the insanity they had to deplore was due to removeable causes, and it was to be hoped that the next few years would show a great fall in the number of asylum inmates.

Mr. E. W. HOBSON said that, although the Asylums Committee had amassed more information on this subject than any other dozen authorities, yet it only gave the Council a mere recital of facts. He hoped the committee would make definite use of its invaluable reports by medical experts, for the information of the people of England in dealing with this most serious question.

Mr. C. JESSON mentioned a case of a young man being anxious to marry a girl—a moral imbecile—who was just leaving an asylum. In spite of all endeavours to dissuade him the man married the girl, and no one could interfere in the matter, as the girl was not at that moment insane.

Mr. H. W. ROWE, a former chairman of the Asylums Committee, declared that no one was willing to bear the onus of the unpopularity of such a proposal as the steriltsation of the insane.

Mr. J. W. GILBERT declared strong opposition to dealing with recurrent insanity by sterilisation.

Notice of Motion.

In order to secure a definite result from the debate Mr. Walter Reynolds has since given notice of the following motion:—

That in order to enable the Council to decide what action should be taken for the prevention of lunacy, especially so far as it is due to hereditary transmission by persons known to be of unsound mind and is to that extent preventable, it be an instruction to the Asylums Committee to submit a full report on the subject of the causes of lunacy, particularly the hereditary causes, with particulars of cases which have come under the observation of the committee of the hereditary transmission of insanity.

MEDICAL MEN AND MUNICIPAL HONOURS.

WE print below brief notes of the medical and municipal careers of the members of the profession who have been elected or re-elected to the mayoral chair. We have dealt already with the appointment of Sir Thomas Crosby to the office of Chief Magistrate of the City of London, and with the relation of medical men to an active municipal life.

Barnstaple.—Mr. John R. Harper, M.R.C.S. Eng., L.R.C.P. Lond., was educated at St. Thomas's Hospital, where he held several house appointments. He is surgeon to the North Devon Infirmary, medical officer of health for Barnstaple rural district, and up to his appointment as mayor of Barnstaple held the posts of medical officer of health of the borough and school medical officer. These two appointments he resigned upon being made mayor. He is a major in the Royal Army Medical Corps, Territorial Force.

Bolton.—Mr. J. Young, M.R.C.S. Eng., L.R.C.P. Lond., who was educated at the Owens College, has been a member of the Bolton town council for eight years and an alderman for four years. He is president of the Bolton Medical Ethical Society and past president of the Bolton Medical Society, a member of the Court of Governors of Victoria University, and chairman of council of the Association of Technical Institutions. He is also a member of the Textile Institute and other educational associations, as well as a governor of several secondary schools.

Congleton.—Mr. W. I. Fern, J.P., L.R.C.P. Irel., L.R.C.S. Edin., was born at Hurdsfield, Macclesfield. He was educated primarily at Christ Church School, Macclesfield, and electing medicine as his profession subsequently went to the Owens College, Manchester, and studied at the Manchester Royal Infirmary. Nine years ago he was returned a member of the town council of Congleton; he is a member of the finance committee and chairman of the watch committee. In his medical capacity he is public vaccinator for Congleton.

Exeter.—Mr. C. J. Vlieland, M.D. Durh., M.R.C.S. Eng.,

L.S.A., after serving as house surgeon at the Kent and Canterbury Hospital in 1879 and at the Hertford General Infirmary in the following year, took up his residence at Exeter in 1882, where he entered into partnership with the late Dr. Mark Farrant. Ten years later he dissolved partnership, but continued in practice. He has been medical officer of health of Exeter since 1882, first under the local board of St. Thomas, subsequently under the urban district council, and afterwards, on the annexation of St. Thomas by the city of Exeter, he was appointed assistant medical officer of health for No. 3 (St. Thomas) District. The offer of the mayoralty for the ensuing year, which he accepted, came as a complete surprise to him, and appears to have met with unanimous approval. He has resigned his appointment as medical officer of health during his mayoralty only.

Faversham.—Mr. S. R. Alexander, M.D. Lond., M.R.C.S. Eng., L.S.A. (re-elected), is an old student of London University and Guy's Hospital. He has been chairman of the governors of the Faversham Grammar School for several years, is a trustee of public charities, a governor of Wreight's and Gibbs's Schools, and represents the University of London on the higher education committee. His election to the mayoral chair last year is believed to be a unique event in the history of the borough, as he had been previously unconnected with the corporation. As Mayor of Faversham he is a Baron of the Cinque Ports, and in that office attended the Coronation of the King in Westminster Abbey. He married in 1890 a daughter of the late Mr. Alfred George Schiff.

Hertford.—Mr. J. Burnett Smith, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S.Glasg., is medical officer for the Herts and Ware isolation hospital and the Herts workhouse and workhouse infirmary. He is medical officer and public vaccinator for the No. 1 District of the Hertford Union, and was formerly house surgeon at the Royal Infirmary, Glasgow, and at the Hertford General Infirmary.

Hartlepool.—Mr. W. S. Gibb, M.B., C.M. Edin. (re-elected), is an honorary physician to the Hartlepools Hospital.

Leamington.—Mr. Harold Mason, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. (re-elected), was educated at Leamington College and received his medical training at Birmingham. He qualified in 1890 and proceeded to the M.B. Lond. in the following year. After holding residential posts at the General Hospital, Birmingham, he became medical officer to the Leamington Provident Dispensary, and has been in active practice for 19 years. He has written one or two papers on the etiology of cancer. In 1898 he successfully contested the South-East Ward of Leamington and was returned unopposed in 1901. In 1904 and in 1907 he was again elected, and last year was appointed mayor, which honour has again been conferred upon him. For ten years previous to his mayoralty he was chairman of the health committee.

Lewes.—Mr. H. Stott, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., belongs to a medical family which for seven generations has been able to count a medical man among its members. For 16 years Mr. Stott was in private practice at Friern Barnet, and held several public appointments, afterwards removing to Lewes, where he has rendered great service to East Sussex as medical officer of health of the combined districts. He is a Fellow of the Society of Medical Officers of Health and secretary of the Brighton and Sussex Medico-Chirurgical Society. In the subject of national defence Mr. Stott takes a great interest, and was formerly a commanding officer to the Cinque Ports Rifles. He is now a Major in the Special Sanitary Service (Territorials). It is worthy of note that after being appointed Mayor Mr. Stott was elected a member of the Council.

Macclesfield.—Mr. C. A. Bradley, M.R.C.S. Eng., was educated at the Owens College, Manchester, and qualified in 1877. At one time he was visiting surgeon to the Macclesfield General Infirmary.

Newport (Mon.).—Mr. J. McGinn, F.R.C.S. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg., was born at Omagh, County Tyrone, in 1862, and was educated at the Christian Brothers' Schools and by private tuition. He received his professional education at the Royal College of Surgeons, Dublin, where he obtained a Fellowship in 1900. After qualifying in 1887 he served a term at the Tyrone County Infirmary as assistant surgeon and then proceeded to Aberdare, where he assisted at the Cottage Hospital and the Aberdare works and collieries for nearly two years. He went to Newport in 1890, when he succeeded to the practice of the late Dr. Ready. He was first elected to the Newport council in 1897 as member for the central ward, which he has since represented with a short interruption, when he was defeated in the newly constituted Crindau ward, which he selected at the redivision of the borough. He is deputy chairman of the health committee and chairman of the hospital sub-committee, and a member of the education, asylum, and parks committee. He married in 1902 a daughter of the late Mr. A. J. Murphy, an old inhabitant of Newport.

Montgomery.—Mr. Nicholas Watson Fairles-Humphreys, M.R.C.S. Eng., L.S.A. (re-elected), was born in 1837 and studied medicine at St. Bartholomew's Hospital. In 1885 he was elected alderman for the borough of Montgomery and has been 13 times mayor. He is a justice of the peace for the county of Montgomery, was high sheriff in 1882-83, and has been a county alderman since 1889. His grandfather, Nicholas Fairles, justice of the peace for the county of Durham, was the originator of the lifeboat movement, and chairman of the first committee.

Pwllheli.—Owen Wynne Griffith, L.R.C.P. & S. Edin., was educated at Guy's Hospital, London, qualified in 1878, and has practised for over 32 years in the "Lleyn" Peninsula, Carnarvonshire. He was first elected a member of the town council of the borough of Pwllheli in 1891 and was returned unopposed in 1894. He was elected alderman in 1896, 1902, and 1908, and was mayor in 1899-1900. He has served on the Carnarvonshire county council for 16 years, and has occupied an aldermanic chair. His name and efforts have for a lengthy period been associated with county, country, and corporate institutions, whilst his influence is a prominent factor in public, private, and philanthropic benefactions.

Saffron Walden.—Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin. (re-elected), was born in 1838. After serving a term of pupilage with Mr. Little, Mr. Young, and Mr. Adams, of Boston, he proceeded to Glasgow University, where he received his medical education, and graduated as M.D. with honours in 1863, having previously passed the examination for the diploma of the Royal College of Surgeons of Edinburgh. In the same year he took the L.R.C.P. Lond. Subsequently he settled at Bampton, Oxon., but removed in 1881 to Saffron Walden, and finally retired from practice in 1908. He entered the town council of the borough of Saffron Walden in 1888 and in 1891 was elected mayor, being re-elected in the following year. He was again appointed in 1900 and re-elected in 1901, and was mayor at the time of the Coronation of the late King Edward VII. and received the Coronation medal. This year he has been elected mayor for the sixth time. Dr. Atkinson joined the medical staff of the 3rd V.B. the Suffolk Regiment, received the V.D. in 1904, and retired with the rank of surgeon-colonel in 1905. He has represented the town council on the joint isolation hospital board, of which he has been chairman since its incorporation in 1903, is a member of the Essex County Territorial Force Association, and has represented the borough on the Essex county council, and also on the county association recently formed for combating consumption.

Wallasey.—Mr. John Oldershaw, J.P., M.D. Brux., L.R.C.P. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg., is the second son of the late Mr. Isaac G. Oldershaw, of Lenton Hall. He was born at Derby, and was educated at Prescot Grammar School and at Cambridge, Edinburgh, and Brussels. His family has long been connected with the learned professions, numbering Dr. John Oldershaw, of Starton, who died in 1807, being a noted physician; and the Venerable Archdeacon Oldershaw, who died in 1847 (the son of a Leicester physician), a zealous dignitary of the Church. Dr. Oldershaw has always taken the greatest interest in local matters, and especially in the question of education, and to his influence must be attributed the building of many of the schools in Wallasey, which was the first town to possess a higher elementary school. Deputations not only from the furthermost parts of England, but from the Continent, have come over to see the schools and to profit by the methods employed in teaching. He entered the town council in 1897, and has served as chairman of several of the committees. Dr. Oldershaw had the honour of being chairman of the council during the year of the Coronation of King Edward VII. He married the only daughter of the late Mr. John Holbrook, of Rolleston, Staffordshire.

Warrington.—Mr. G. W. Joseph, M.D. Durh., L.R.C.P. Irel., M.R.C.S. Eng., L.S.A. (re-elected), was born at Liverpool on Nov. 29th, 1850. He is the son of Mr. Neild Joseph, chemist, of that city, and was educated at Kirkbean School, near Dumfries, and at Liverpool Institute. He studied medicine at Liverpool Royal Infirmary School of Medicine, and University College, Liverpool, and after matriculating at the University of Durham he qualified in 1873, proceeding later to the Durham degree. He went to Warrington in 1874 as house surgeon to the infirmary, and for seven years was medical officer of health of the borough, and was also first public analyst for the borough. For 30 years he was honorary surgeon to the infirmary, and is now honorary consulting surgeon to that institution. He entered the Warrington town council in May, 1905, and has served on the health and other committees. He is chairman of the watch committee, and deputy chairman of street improvement committees, and takes a great interest in sanitary and social reform. In 1909 he was appointed a justice of the peace for the borough.

Wimbledon.—Surgeon-Major E. L. McSheehy, A.M.D. (retired), M.D., M.Ch. R.U.I., F.R.C.S. Irel., who is a justice of the peace for the county of Surrey, was educated at Queen's College, Cork, and at Paris. He entered the medical department of the army in 1857 and retired from the service 20 years later. He has always taken an active interest in the municipal affairs of Wimbledon and is a much respected member of the borough.

MEDICINE AND THE LAW.

A Rink and its Neighbours.

IN the case of Page and others *v.* Watt and others, tried by Mr. Justice Darling without a jury, damages and an injunction were claimed by persons residing in the neighbourhood of a roller-skating rink against its proprietors, a nuisance being alleged arising out of the noises made by the skating, a mechanical organ, varied by a band, a megaphone used for making announcements to the skaters, and a siren. After witnesses had been called on both sides his lordship awarded as damages £20 to a plaintiff who owned certain houses affected, £10 to the former occupier of one of them, and £20 to the occupier of another. An injunction was refused. The result of this case, with that of the recent action referred to in THE LANCET of Nov. 25th, p. 1505, in which noises arising out of the Exhibition at Earl's Court were complained of, should tend to make caterers for the public more careful before they open places of amusement to prevent them as far as possible from interfering with the comfort and health of those who have no pecuniary interest in them.

Hebert v. *The Royal Society of Medicine.*

The Court of Appeal recently had before it an appeal from the decision of Mr. Justice Darling in a case in which the question at issue was whether the plaintiff, Dr. P. Hebert, was entitled to describe himself as a member of the Royal Society of Medicine. He had been so described in the advertisement of a book of which he was the author, and the secretary of the society had written to the publishers to the effect that he was wrongly so described. His claim to membership of the Royal Society of Medicine was based upon membership of the Gynæcological Society, coupled with the alleged sending of a postcard to the former society intimating his desire and intention of joining it. Under the Charter and by-laws of the defendant society the plaintiff claimed to be entitled to acquire membership thus, and that he was, in fact, a member of the Royal Society of Medicine. At the conclusion of the trial Mr. Justice Darling said that he was not satisfied by the plaintiff's evidence that he had communicated his desire to be admitted to membership of the Royal Society of Medicine in the manner described, and intimated that this finding of fact would be a decision in favour of the society in respect of the claim of membership and also of a pending action for libel in connexion with the denial of the plaintiff's right to describe himself as a member of the defendant society. The Court of Appeal declined to interfere with Mr. Justice Darling's judgment, and having dismissed the plaintiff's appeal informed counsel for the appellant that their decision and that of Mr. Justice Darling rendered the whole matter *res judicata*—that is to say, the plaintiff would be precluded from proceeding with an action for libel (or any other action) which would raise questions of fact already determined.

Petty Frauds upon Medical Practitioners.

Claude Hamilton, who described himself as a surgeon but refused to give an address, was sentenced by Mr. Chapman at the Tower Bridge police court recently, under the Prevention of Crimes Act, Section 7, to 12 months' imprisonment after proof that he had obtained, or attempted to obtain, by fraud, various small sums of money. An attempt to obtain money had been made upon Dr. R. Larkin, divisional surgeon of police residing in the Borough, and whisky and milk had been obtained from Dr. Helen Gordon Clark. In both these cases the prisoner said that he was a medical man from Australia and that he had been robbed and pretended that he was in a state of collapse. He was also charged with obaining 2*s.* 6*d.* from the Rev. R. Doran, with the variation that in that instance he stated that he was from Ireland. Fourteen previous convictions and many complaints against him were proved.

200 Bogus Claims for Accidents.

Ernest Pendrigh, 37 years of age, pleaded guilty at the Old Bailey recently to three counts of an indictment charging him with obtaining money by false pretences from tradesmen. His pretence consisted in falling down and claiming to have been injured through the negligence of the persons whom he made his victims, and during three years it was estimated that about 200 such claims had been successfully made by him with the assistance of a confederate. The prisoner suffered from a malformed right wrist, which assisted him in extracting money as supposed compensation. He was arrested through playing the same trick upon two butchers in the same morning, alleging that he had fallen upon pieces of fat outside their shops, and the fact that both at once sought the assistance of the Incorporated Society of Meat Traders led to the detection of the fraud. A man alleged to be his confederate accompanied the prisoner on the occasions in question, making notes on his behalf of the incident with particulars of the name and address of the person from whom the money was to be obtained. Pendrigh was sentenced to 18 months' hard labour. It will be noted that Pendrigh's success was due to his victims paying what perhaps seemed to them a modest compensation in preference to fighting his claim. An action would have required medical evidence as to the existence and cause of the alleged injuries, and could hardly have been repeated with safety in the same court.

ASYLUM REPORTS.

Annual Report of the Glamorgan County Lunatic Asylum for the Year 1910.—The daily average number resident at this asylum was 1652. There were admitted 338 patients. Of these, 142 males and 100 females were first attack cases and direct admissions. Cases of the confusional and demented type increased from 21 in the previous year to 44, while cases of melancholia have decreased from 91 to 59. In 41·5 per cent. of the admissions there existed an inherited predisposition to insanity, allied neuroses, or alcoholism, the proportion being 68·6 per cent. insanity and other neuroses, and 31·3 per cent. alcoholism. The chief exciting causes were mental stress 15·7 per cent., and alcohol 14·5 per cent. 132 patients were discharged, the recovery rate calculated on the total admissions being 27·8 per cent. and on the direct admissions 28·5 per cent. The deaths numbered 160, the percentage to the daily average numbers on the registers being 9·6. Post-mortem examinations were held in 105 instances, the most frequent causes of death being tuberculous disease 20 per cent., general paralysis of the insane 14 per cent., and senile decay 10 per cent. The Commissioners in Lunacy in their report dated Jan. 25th, 1910, write disparagingly of the dinner they saw served on the occasion of their visit. "The plates were cold, a considerable percentage of the potatoes were unsound, and although the portions served out to the men were for the most part sufficient, this was certainly not so in regard to the women. The portions set apart for the various tables were in no way properly divided, but wholly apart

from this, some of the meat was such as, though possibly most suitable for soup or stock, should never have been issued as table meat, consisting as it did of gristle, bone, and fat." The Commissioners trust that immediate and active attention may be given by the committee to this matter. It appears that this is not the first occasion that the Commissioners have had occasion to remark on the character of the diet at this asylum.

Annual Report of the Stirling District Asylum for the Year ending May 14th, 1911.—The average number of patients resident at this asylum during the year was 730. The admissions numbered 219. Forty-eight of those admitted had been under treatment before, but a considerable number of these were patients who had been previously discharged as unrecovered and removed to the care of their relatives or boarded out under the guardianship of strangers. In some cases the patients were returned to the asylum owing to the death of the guardian and in others on account of bodily illness or infirmity. The age of those admitted varied from 14 to 79; the largest number of males admitted were from 25 to 30 years of age and the largest number of females from 30 to 35 years of age. Only 18 of those admitted were in average bodily health. In 152 patients the health was in poor condition and 49 patients were admitted in an exhausted state. An inherited predisposition to insanity was found in 30 per cent. of those admitted. In 15 per cent. the mental breakdown was attributed to alcoholic excess, and in 21 cases insanity was the result of general paralysis and other gross forms of brain disease. One hundred and twenty-five patients were discharged during the year, and of this number 75 were recovered, giving a recovery rate calculated on the admissions of 34 per cent. for both sexes. A lowered recovery rate has been the general experience throughout the Scottish asylums of recent years. This is probably mainly to be accounted for by the accumulation in asylums of chronic incurable cases, and in part also to the present-day system of treating acute cases of mental disease in the observation wards of the large parochial hospitals. The deaths during the year numbered 76, the death-rate calculated on the average number resident being 10·2. The mean age at death was 50. Seven patients who had died had been resident in the asylum for over 20 years. Post-mortem examinations were held in 84 per cent. of the deaths. Dr. Robert B. Campbell, medical superintendent, has no doubt that the modern method of keeping the inmates of the institution as much as possible in the open air is an important factor in promoting the comfort and health of the patients. The recently admitted patients are treated in bed in the verandahs in connexion with the hospitals and the small sanatorium verandahs also have their accommodation fully taxed.

Annual Report of the Inverness District Asylum for Year ending May 15th, 1911.—The average number of persons resident at this asylum during the year was 691. The admissions during the year numbered 162, representing 159 persons, there having been two males and one female admitted twice during the year. Of the total number of patients admitted 45 had previously been under asylum treatment at this institution. Of the 45 readmissions 29 were admitted for the second time, 6 for the third time, 4 for the fourth time, 2 females for the fifth time, 1 male for the seventh time, 1 male and 1 female for the eighth time, and 1 female for the ninth time. The ages of those admitted varied from 16–90. Eighty-two of the admissions were cases of melancholia and 42 were cases of mania. As a result of the recent Census it appears that though there has been a decrease in the total population of the councils included in the lunacy district, there has not been any corresponding decrease in the admission rate of patients to the asylum. Dr. T. C. Mackenzie, the medical superintendent, considers it possible that a decrease in the general population of the district may mean for some time at any rate an increase in the population of the asylum. It may prove to be the case that aged persons, who have remained behind in their homes, while their descendants have left the country, may require to be sent to the asylum not so much because they are mentally afflicted as because there is no one at home to look after them in their old age and infirmity. Among the probable causes of insanity in the patients admitted, a hereditary or family predisposition to insanity existed in 71 of the 162 cases, whilst senility and alcoholism were amongst the assigned causes in 22 and 25 cases respectively. One hundred and fourteen patients were discharged during the year. Of this number, 71 were discharged recovered, giving a recovery-rate calculated on the admissions of 44·4 per cent. for both sexes. The number of deaths during the year was 45, the death-rate calculated on the average number resident being 6·5. Fifteen of the deaths were due to pulmonary tuberculosis and eight to senile decay. Post-mortem examinations were held in 38 out of the 45 cases. The mean age at death for male patients was 53·8 and for female patients 61·2, giving a mean age at the death of both sexes of 57·5.

Annual Report of the County Borough of West Ham Lunatic Asylum for 1910.—The total admissions to this asylum during the year were 248, of whom 106 were males and 142 females. Forty-three of the cases admitted were re-admissions and 20 were transfers. Forty-six of the admissions suffered from forms of mania and 67 from melancholia, 37 were cases of dementia, 31 of general paralysis, and 16 of epilepsy. Of the direct admissions 69 cases had a history of hereditary insanity or epilepsy, and 14 others of hereditary alcoholism, giving a total percentage of 36. It appears that of 1869 cases admitted during the nine years, 1902 to 1910 inclusive, more than 53 per cent. had a hereditary history of insanity or were congenitally defective. Of the exciting causes alcoholic excess was ascertained in 37 cases and mental stress in 25 cases. One hundred and sixty-eight patients were discharged, and of these 66 were discharged recovered, giving a percentage of 28·94 on the direct admissions. These are comparatively low figures and are due to the hopelessly incurable character of the cases admitted. Out of 51 cases in which the duration of the mental attack from its commencement was ascertained, recovery took place in less than nine months in 31 cases. The deaths numbered 83, of whom 46 were males and 37 females, giving a percentage of 9·33 on the average number resident. Senile decay was regarded as being the principal cause of death in 28·9 per cent. of the cases, and general paralysis in 31 per cent. In 14 cases tuberculosis was found post mortem. It appears from the tables that the proportion of certifiable insane belonging to West Ham is greater than that of the whole country.

THE NATIONAL INSURANCE BILL.

THE GENERAL MEDICAL COUNCIL AND THE BILL.

IN reply to the representations to the Government by the General Medical Council,[1] which were communicated to the Chancellor of the Exchequer on Nov. 30th, the President, Sir Donald MacAlister, has received the following letter:—

[COPY.]

Treasury Chambers, Whitehall, S.W.,
7th December, 1911.

DEAR SIR DONALD,—I am much indebted to you, and to the General Council of Medical Education and Registration, for your letter of the 30th November, and for the valuable suggestions it contains with regard to certain provisions of the National Insurance Bill. I am glad that the Bill in its present form is in substantial agreement with these suggestions, as you will see from the following summary, in which they are dealt with seriatim.

(1) It is now explicitly provided in Clauses 74, 75, and 76 (now 80, 81, 82), relating to Scotland, Ireland, and Wales respectively, in the Bill as amended in Report, that in each case at least one of the Insurance Commissioners shall, as in England, be a duly qualified medical practitioner.

(2) The provision in the same clauses that the Commissioners for those countries shall have all the like powers and duties as are conferred on the Insurance Commissioners includes the appointment by them of an Advisory Committee in each case.

(3) A substantial increase has now been made in the number of medical practitioners on the Local Health Committees. Under Clause 55 (now 58) as amended, besides the two appointed by the profession itself and the minimum of one appointed by the Commissioners on each such committee, the County Council is now bound to appoint one additional medical practitioner in every case, or two where the committee reaches the number of 60, or three where it reaches 80.

(4) The provisions of Clause 58 (now 61) constituting Local Medical Committees extend to the other countries as well as to England, such modifications as are required, e.g., in the definitions of area, &c., being secured under the clause relating to the application of the Bill to the particular country. It must be remembered, however, that Ireland stands apart from the other countries because medical benefit is not there provided, and therefore the questions dealt with by Local Medical Committees elsewhere do not there arise.

(5) Clause 16 (4) (now 15 (4)) is limited to systems or institutions existing not when the Act comes into operation, but when it is *passed*.

[1] THE LANCET, Dec. 9th, 1911, p. 1640.

Any attempts to take unfair advantage of this section could be frustrated by the power of the Insurance Commissioners and the Local Health Committees to withhold approval.

(6) The relation of the Insurance Bill to hospitals and other voluntary institutions has been very carefully considered; and I am confident that the extreme statements that have been made as to its effect on voluntary subscriptions will not prove to have been justified. If experience should show that the danger is to any extent real and serious the nation may be trusted to see that steps are taken to prevent the efficiency of the hospital system being impaired.

Yours sincerely,
(Signed) D. LLOYD GEORGE.

Sir Donald MacAlister, K.C.B., President, General Council of Medical Education and Registration of the United Kingdom.

THE BRITISH CONSTITUTION ASSOCIATION AND THE BILL.

The council and committee of the British Constitution Association petitioned the House of Lords in respect of the Bill, and concluded as follows:—

It is respectfully represented to your Lordships that the National Insurance Bill now under your Lordships' consideration was not even in outline subjected to the judgment of the Electorate at the last, or any, General Election; that so far as it seeks to compel large sections of His Majesty's subjects to contribute to an Insurance Scheme which may, or may not, commend itself to their judgment, it introduces a novel principle into our Legislative system, the effects of which cannot fail to be far-reaching, and may prove highly disastrous; that it has been passed by the House of Commons without adequate opportunity having been afforded for the discussion of many of its most important provisions, and that a Measure so drastic and so exceptional should not be passed into Law until it has been subjected to further examination and discussion within the Houses of Parliament, and in the Country.

Your Petitioners humbly pray that your Honourable House may either reject the Bill,

OR

In the event of the Bill being passed (whether amended or not by your Lordships) that a Clause may be added providing that the Measure shall not become law until it has been submitted to the judgment of the Electors at a Special Poll to be taken for the purpose in such a manner as Parliament may provide.

And your Petitioners as in duty bound will ever pray, &c.

The House of Lords has had the same view forcibly put before it, no doubt, by many people, but it has been generally foreseen that the peers will pass the Bill practically without comment.

As we go to press a meeting of the British Constitution Association is being held, under the presidency of Lord Robert Cecil, M.P., to protest against the National Insurance Bill becoming law "before the country has had full time to consider the measure."

THE BRITISH MEDICAL ASSOCIATION AND THE BILL.

The following circular from the medical department of the British Medical Association, dated Dec. 11th, gives the opinions of the chairman of Representative meetings and the chairman of the Council as to how much has been obtained for the medical profession under the Insurance Bill and what still remains to be obtained:—

1. On June 1st, 1911, the British Medical Association adopted the following policy with respect to the Insurance Bill, and circularised every member of the profession asking for support of the following six essential principles: (1) An income limit of £2 a week for those entitled to medical benefit; (2) free choice of doctor by patient subject to consent of doctor to act; (3) medical and maternity benefits to be administered by Local Health Committees and not by Friendly Societies; (4) the method of remuneration of medical practitioners adopted by each Local Health Committee to be according to the preference of the majority of the medical profession of the district of that committee; (5) medical remuneration to be what the profession consider adequate, having due regard to the duties to be performed and other conditions of service; (6) adequate medical representation among the Insurance Commissioners, in the Central Advisory Committee, and in the Local Health Committees, and statutory recognition of a Local Medical Committee, representative of the profession in the district of each Health Committee.

2. On June 15th the members of the profession were asked to pledge themselves, in the event of the Bill becoming law, not to enter into arrangements for the treatment of insured persons on terms inconsistent with the above declared policy of the Association.

3. The Insurance Bill will probably become law within the next fortnight, and the Association and profession have to consider their future action towards it.

4. The policy of the Association as expressed in the above stated six cardinal principles is absolutely unchanged.

5. The Bill by the efforts of the Association has now been so amended that there is no legal barrier against the profession securing the fulfilment of its entire policy.

6. The following principles of the Association have been incorporated in the Bill as it has now left the House of Commons, viz., the free choice of doctor, the administration of medical and sanatorium benefits by the Local Health Committee, the representation of the profession on all the administrative bodies established under the Act; the statutory recognition of a committee of the medical profession in each district.

In addition the essential principle of a wage limit is recognised by Clause 15 (3) in the Bill, the precise amount being fixed by the profession in each district in negotiation with the Local Health Committee.

7. The remaining principles of the policy of the Association not dealt with under the Bill are the rate and method of remuneration and the amount of the wage limit. The first of these, the most essential of the principles of the Association, the Representative Body decided should be settled by agreement between members of the profession in each district and the Local Health Committee. As regards the second, it decided that this also if not embodied in the Bill should be fixed by local negotiation.

8. The Association, through the Representative Body, has taken every possible step to secure that in every locality where its assistance is required, the whole resources and strength of the Association shall be used to support the profession in securing the essential principles.

9. If each member of the profession will do his share in this great work he may fully rely upon the organisation of the Association being both ready and adequate to secure success.

(Signed) EWEN J. MACLEAN,
Chairman of Representative Meetings.
J. A. MACDONALD,
Chairman of Council.

Medical Department, British Medical Association, London, Dec. 11th, 1911.

MEETINGS OF THE MEDICAL PROFESSION.

As we go to press a mass meeting of the medical profession is being held at the Midland Hall, Midland Hotel, Manchester. Mr. G. A. Wright has been announced to take the chair. Medical men from all parts of the country have been invited. Resolutions will be proposed "calling upon all medical men to take no office under the Bill," and to form a temporary union to deal with the situation.

A meeting has been convened by an influential group of medical men for Tuesday next, Dec. 19th, at 4.30 P.M., at the Queen's Hall, Langham-place. A preliminary meeting has been held to draft the resolutions and showed that the general tone of these will be strong, their sense being to imply that existing associations have failed to safeguard the interests of the profession, and that a further union of medical men is required. Sir W. Watson Cheyne will preside over the meeting.

A representative meeting of medical practitioners in the Ilford district was held on Dec. 5th, in the Recorder Buildings, with the object of securing unity of action and of determining the main principles which should guide the profession in its work with the National Insurance Scheme in this locality. After some discussion a resolution was moved and carried unanimously to the effect that the meeting forms itself into the "Ilford Medical Union," to secure joint action locally, and through the British Medical Association nationally, with the rest of the profession, to safeguard the interests of the profession and the health of the public; to endeavour to secure fair rates of remuneration and fair conditions of employment under the National Insurance Scheme. All the medical men practising in the district who were prevented from attending the meeting have signified their agreement with the resolution, and their intention to join the union.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7506 births and 4718 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had steadily increased from 13·1 to 15·7 in the four preceding weeks, declined to 15·2 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·3 per 1000, and was 0·4 per 1000 above that recorded in London during the same period. The annual death-rates in the 77 towns last week ranged from 6·8 in Hornsey, 7·1 in Willesden and in Walthamstow, 7·8 in East Ham, and 8·6 in Bournemouth to 21·5 in Walsall, 21·7 in Sunderland, 22·2 in Preston, and 23·0 in Stockton-on-Tees. The 4718 deaths from all causes in the 77 towns were 151 fewer than the number in the previous week, and included 238 which were referred to the principal epidemic diseases, against 259 and 276 in the two preceding weeks. Of these 238 deaths, which was the lowest aggregate number recorded in any week of the current year, 60 resulted from diphtheria, 52 from measles, 45 from whooping-cough, 45 from infantile

diarrhœa, 20 from enteric fever, and 16 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 0·8 per 1000, against 0·8 and 0·9 per 1000 in the two previous weeks. The deaths attributed to diphtheria, which had been 64, 61, and 57 in the three preceding weeks, rose to 60 last week, and included 16 in London and its suburban districts, 4 in Bradford, 3 in Leicester, and 3 in Liverpool. The deaths referred to measles, which had been 51, 44, and 66 in the three preceding weeks, declined last week to 52, and of these 9 occurred in London, 8 in Norwich, 7 in Liverpool, 5 in Burnley, 4 in Nottingham, and 3 in Salford. The fatal cases of whooping-cough, which had steadily risen from 16 to 38 in the five preceding weeks, further rose to 45 last week; 11 deaths were registered in London and its suburban districts, 6 in Walsall, and 3 each in Birmingham, Sheffield, and Newcastle-on-Tyne. The deaths of infants under two years of age attributed to diarrhœal diseases, which had continuously declined from from 2714 to 68 in the 15 preceding weeks, further fell to 45 last week, and included 11 in London, 4 in Birmingham, 4 in Manchester, and 3 in Grimsby. The 20 deaths referred to enteric fever last week were 3 below the average number in the four preceding weeks, and included 2 each in London, Liverpool, Burnley, and Sheffield. The fatal cases of scarlet fever, which had been 29 and 25 in the two preceding weeks, further declined to 16 last week; 3 deaths were recorded in London, 2 in Liverpool, and 2 in Manchester. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 2213, 2166, and 2141 at the end of the three preceding weeks, had further declined to 2089 at the end of the week under notice; 241 new cases of this disease were admitted to these hospitals during the week, against 291, 203, and 248 in the three preceding weeks. These hospitals also contained on Saturday last 1306 cases of diphtheria, 194 of whooping-cough, 83 of measles, and 79 of enteric fever, but not one of small-pox. The 1239 deaths from all causes in London last week were 67 fewer than the number in the previous week, and included 331 which were referred to diseases of the respiratory system, against numbers steadily rising from 170 to 297 in the five preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 158 and 188 in the two preceding weeks, further rose to 201 last week, and 420 inquest cases were registered. The causes of 44, or 0·9 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and its eight suburban districts, Bristol, Bradford, Newcastle-on-Tyne, Nottingham, Salford, and in 42 other smaller towns. The 44 uncertified causes of death last week included 9 in Birmingham, 7 in Liverpool, 5 in South Shields, and 3 in Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 796 births and 550 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had been 16·7 and 18·0 in the two previous weeks, declined to 16·8 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·7, and was 2·4 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the several Scotch towns last week ranged from 14·1 and 14·5 in Edinburgh and Perth to 18·5 in Aberdeen and 24·3 in Greenock. The 550 deaths from all causes were 39 fewer than the number in the previous week, and included 58 which were referred to the principal epidemic diseases, against 63 and 72 in the two preceding weeks; of these 58 deaths, 23 resulted from measles, 10 from whooping-cough, 9 from diarrhœal diseases, 8 from diphtheria, 5 from enteric fever, and 3 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·3, and was 1·0 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had been 28, 23, and 31 in the three preceding weeks, declined to 23 last week, and included 13 in Aberdeen, 7 in Glasgow, and 2 in Greenock. The deaths attributed to whooping-cough, which had been 4, 7, and 6 in the three preceding weeks, rose last week to 10, of which 5 were registered in Aberdeen and 3 in Glasgow. The deaths assigned to diarrhœal diseases, which had been 16 in each of the two previous weeks, declined last week to 9, all but one of which related to infants under two years of age; 3 deaths were recorded in Glasgow, 3 in Paisley, and 2 in Dundee. The fatal cases of diphtheria, which had been 7 and 15 in the two preceding weeks, declined to 8 last week, and of these 2 occurred in Glasgow and 2 in Leith. The 5 deaths attributed to enteric fever were 3 in excess of the average in the three preceding weeks and were all recorded in Glasgow. The 3 fatal cases of scarlet fever were registered in Glasgow, Paisley, and Greenock respectively. The deaths referred to diseases of the respiratory system, which had been 113 in each of the two preceding weeks, increased to 122 last week, but were 29 below the number recorded in the corresponding week of last year. Of the deaths from all causes in the Scotch towns last week, 144, or 26 per cent., were recorded in public institutions, and 19 were attributed to different forms of violence. The causes of 16, or 2·9 per cent., of the deaths in the eight towns in the week under notice were not certified or not specified; in the 77 large English towns the proportion of uncertified causes last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 502 births and 391 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had been 18·0 and 18·3 in the two previous weeks, declined to 17·7 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·2 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·3, while in the eight Scotch towns it was equal to 16·7 per 1000. The annual death-rate last week was equal to 18·6 in Dublin (against 14·3 in London), 16·1 in Belfast, 26·5 in Cork, 19·2 in Londonderry, 16·3 in Limerick, and 20·9 in Waterford; while in the 16 smallest of these Irish towns the death-rate last week did not exceed 15·1 per 1000. The 391 deaths from all causes were 12 fewer than the number in the previous week, and included 25 which were referred to the principal epidemic diseases, against numbers declining from 47 to 40 in the three preceding weeks; of these 25 deaths, 7 resulted from diarrhœal diseases, 6 from whooping-cough, 4 from scarlet fever, 4 from diphtheria, 2 from measles, 1 from enteric fever, and 1 from typhus, but not one from small-pox. These 25 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·1 per 1000; in the 77 English towns the mean annual death-rate from these diseases last week did not exceed 0·8 per 1000, while in the eight Scotch towns it was equal to 1·8. The deaths attributed to diarrhœal diseases, which had been 19, 19, and 14 in the three preceding weeks, further declined last week to 7, all of which related to infants under 2 years of age; 4 deaths were recorded in Dublin and 2 in Belfast. The deaths referred to whooping-cough, which had been 11 in each of the two preceding weeks, declined to 6 last week, and comprised 3 in Dublin, 2 in Belfast, and 1 in Lurgan. The 4 fatal cases of scarlet fever were equal to the average in the five preceding weeks. The 4 deaths assigned to diphtheria, of which 2 were recorded in Belfast, were equal to the average in the two preceding weeks. The deaths referred to measles numbered 2, against 4 in each of the two preceding weeks, and were registered in Dublin and Cork respectively. The fatal case of enteric fever was recorded in Dublin, and that of typhus in Cork. The deaths referred to diseases of the respiratory system, which had been 73, 78, and 77 in the three preceding weeks, rose to 92 last week. Of the 391 deaths from all causes in the Irish towns last week, 125, or 32 per cent., were recorded in public institutions, and 9 were attributed to different forms of violence. The causes of 13, or 3·3 per cent., of the deaths in the 22 towns last week were not certified either by a registered medical practitioner or by a

coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·9 per cent. in the 77 English towns, but was equal to 2·9 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet-Surgeon Patrick Brodie Handyside has been promoted to the rank of Deputy Surgeon-General in His Majesty's Fleet (dated Nov. 25th, 1911).

ROYAL ARMY MEDICAL CORPS.

Colonel F. H. Treherne has taken up duty at Bangalore as Principal Medical Officer of the Bangalore and Southern Brigades. H.E. the Viceroy and Governor-General of India has been pleased to appoint Brevet-Colonel R. H. Firth, sanitary officer, army headquarters, Simla, to his personal staff as Honorary Surgeon in succession to Colonel R. H. Forman, retired. Lieutenant-Colonel W. C. Beevor, C.M.G., lately commanding the Station Hospital at Bangalore, has taken over charge of the Military Hospital at Fermoy. Lieutenant-Colonel R. L. R. Macleod, lately commanding the Station Hospital at Aden, has been selected for the higher rate of pay under Article 317 of the Royal Warrant. Lieutenant-Colonel R. W. Wright has been appointed to command the Station Hospital at Fyzabad for a period of three years. Lieutenant-Colonel J. Fallon, from Preston, has embarked for a tour of service with the Northern Army in India, and on arrival will be posted to the Third (Lahore) Division. Lieutenant-Colonel C. E. Nichol, at present commanding the Station Hospital at Maymyo, Burma, has been granted an extension of his Indian tour of service until further orders. Lieutenant-Colonel B. J. Inniss has been transferred from the Eastern Command to the Irish Command. Major J. D. Mc D. McCarthy has taken up duty as Specialist Sanitary Officer to the Second (Rawal Pindi) Division, in succession to Major F. Smith, D.S.O., transferred to command the Station Hospital at Calcutta. Major M. P. Corkery, in medical charge of the Lawrence School and Residency Surgeon at Mount Abu, has arrived home on six months' leave of absence. The leave granted to Major R. J. Copeland, from Meerut, has been extended by six months on the recommendation of a medical board. Major H. O. B. Brown-Mason has been appointed Specialist in Dermatology and Venereal Diseases to the Sixth (Poona) Division. Major E. M. Morphew, on transfer to the Home Establishment from India, has been posted for duty to the Western Command. Major J. A. Hartigan has taken up duty in North China. Major J. G. Gill has been transferred from Secunderabad to the Station Hospital at Bangalore. Major W. H. S. Nickerson, V.C., from Rawal Pindi, has joined for duty at Cherat. Major B. Watts has been appointed Specialist in Midwifery and Diseases of Women and Children to the Seventh (Meerut) Division. Major A. F. Carlyon, from Devonport, has embarked for a tour of duty at Mauritius by exchange with Captain M. Foulds, surgical specialist at Belfast. Major G. W. Tate has taken up duty in Ireland as Medical Inspector of Recruits. Captain F. M. Parry, from Maidstone, has embarked for a tour of duty at Mauritius. Captain S. E. Lewis has taken up charge of the Military Families Hospital at Devonport. Captain R. G. Archibald has arrived home on leave of absence from Egypt. Captain C. D. Myles has been transferred from the Southern Command to the Western Command. Captain F. P. Lauder, from Cork, has been appointed to Youghal for duty. Captain A. D. Jameson, specialist in dermatology and venereal diseases to the Aldershot Command, has embarked for a tour of service with the Northern Army in India. Captain D. L. Harding, from Athlone, has taken up duty at Belfast. Captain C. E. Fleming, from Colchester, has arrived for a tour of duty in South Africa. Captain C. R. Sylvester-Bradley, from Cosham, has been appointed Adjutant to the Royal Army Medical Corps School of Instruction, Eighth (Wessex) Division, at Exeter, in succession to Major R. H. Lloyd, whose tenure of the appointment has expired. Captain A. H. McN. Mitchell, specialist in ophthalmology at the Royal Victoria Hospital, Netley, has been placed under orders by the War Office for a tour of service in Jamaica. Captain J. E. Powell has been transferred from the Northern Command to Alderney. Captain F. J. Stuart, from Fyzabad, has taken up duty at Meerut Cantonment. Captain C. A. T. Conyngham, from the Station Hospital at Quetta, has been detailed for a course of instruction in X-Ray Management at the Dehra Dun X-Ray Institute. Lieutenant E. C. Stoney, at present in charge of the Military Families Hospital at Colchester, has been detailed by the War Office for a tour of service in India during the present trooping season. Lieutenant R. H. Nolan, serving at Barian Military Hospital, Murree Hills, has been granted eight months' leave of absence home, on the recommendation of a medical board. Lieutenant A. D. Stirling, from Piershill, has taken up duty at Alexandria. Lieutenant T. J. Hallinan has been transferred from Youghal to the Military Hospital at Limerick.

INDIAN MEDICAL SERVICE.

Surgeon-General W. S. Bannerman, Surgeon-General with the Government of Madras, has been appointed to the suite of His Excellency the Governor of Madras during the Coronation Durbar at Delhi. Colonel D. ffrench-Mullen, deputy principal medical officer of His Majesty's Forces in India, has been selected for appointment as Principal Medical Officer of the Sirhind and Jullundur Brigades, in succession to Colonel H. Hendley. The Honourable Lieutenant-Colonel S. H. Henderson, Inspector-General of Prisons in the United Provinces of Oudh and Rohilkhand and Member of the Administrative Council, has been appointed to the suite of His Excellency the Lieutenant-Governor of the United Provinces during the Coronation Durbar at Delhi. Lieutenant-Colonel E. Jennings, superintendent of the Central Prison at Farrukhabad, United Provinces, has been granted privilege leave of absence, combined with furlough, for a total period of two years. Major C. B. Harrison has arrived home on leave of absence from Madras Presidency. The services of Major W. H. Roberts, plague medical officer in the Punjab, have been placed at the disposal of the Home Department of the Government of India. On return from furlough Captain G. G. Swan has been appointed to Ludhiana as Civil Surgeon, in succession to Captain M. Corry, who has been appointed Civil Surgeon at Mooltan. Captain H. C. Keates, at present officiating as civil surgeon at Jullundur, has been directed to proceed to Dehra Ghazi Khan as Civil Surgeon on relief by Major J. Peck, returning from furlough. Captain J. W. H. Babington has arrived home on leave of absence from India. Captain E. C. Hepper has been appointed to the medical and sanitary charge of the United Provinces Camps at the Coronation Durbar at Delhi. Captain E. T. Harris has been granted four months' extension of his leave of absence home by the Right Honourable the Secretary of State for India. Captain M. C. Kendrick has been appointed to officiate as Statistical Officer to the Government of India in the Medical and Sanitary Departments during the leave of absence of Major S. P. James. Captain C. Gill has taken up duty as Officiating Civil Surgeon at Simla during the absence on leave of Lieutenant-Colonel C. Duer. Captain N. S. Wells has received one month's extension of his leave of absence on the recommendation of a medical board. Captain F. O. D. Fawcett and Captain G. M. Millar have returned to India on the expiration of their leave. Captain Armytage Green, on appointment to the Civil Medical Department, has been posted to Jalpaiguri as Civil Surgeon. Captain E. A. Walker, civil surgeon at Bassein, has been granted leave of absence, combined with furlough, for a total period of two years. The services of Captain A. N. Dickson have been placed temporarily at the disposal of the Government of the United Provinces for plague prevention duty. His Excellency the Governor of Bombay in Council has been pleased to appoint Captain C. C. Murison to officiate as Superintendent of the Medical School at Hyderabad during the absence on deputation of Lieutenant-Colonel B. B. Grayfoot. Captain J. L. Lunham has been selected for appointment as Personal Assistant to the Surgeon-General with the Government of Bombay, in succession to Captain R. M. Barron, whose services have been replaced at the disposal of the Government of India.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd Highland Field Ambulance, Royal Army Medical Corps: Lieutenant Arthur M. Davie to be Captain (dated Nov. 2nd, 1911).

1st East Lancashire Field Ambulance, Royal Army Medical

Corps: Major William Leonard Bentley, from the 3rd East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major, with precedence in the unit as from April 1st, 1908, next above Major Herbert G. Parker (dated May 20th, 1911).

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Major William Bridgett Pritchard, from the 1st East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major, with precedence in the unit as from April 1st, 1908, next above Major Fred D. Woolley (dated May 20th, 1911).

3rd South Midland Field Ambulance, Royal Army Medical Corps: Lieutenant George Scott Williamson, from the Yorkshire Mounted Brigade Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated Oct. 5th, 1911).

2nd Wessex Field Ambulance, Royal Army Medical Corps: Lieutenant Robert Burnet to be Captain (dated Oct. 1st, 1911).

THE DURBAR HONOURS.

In connexion with the crowning of His Majesty the King as Emperor of India a long list of honours has been issued rendering necessary a statutory increase in the numbers of the two Indian Orders. Among the members of the medical profession in the list is the name of Surgeon-General Charles Pardey Lukis, C.S.I., the Director-General of the Indian Medical Service and an additional member of the Council of the Governor-General of India for making Laws and Regulations, who has been promoted to a Knight Commandership of the Order of the Star of India. Surgeon-General Francis Wollaston Trevor, C.B., K.H.S., Principal Medical Officer in India, has also received a similar honour.

Among the Companions of the Order of the Star of India are the names of Lieutenant-Colonel William Burney Bannerman, I.M.S., Surgeon-General with the Government of Madras, and lately Director of the Bombay Bacteriological Laboratory; Colonel George Francis Angelo Harris, V.H.S., Inspector-General of Civil Hospitals, Bengal; and Lieutenant-Colonel Arthur Russell Aldridge, R.A.M.C., lately Sanitary Officer at the Army Headquarters.

In the list of Knights Commanders of the Order of the Indian Empire is the name of Surgeon-General Arthur Mudge Branfoot, C.I.E., I.M.S. (retired), President of the Medical Board of the India Office. Among the Companions of the Order are the names of Lieutenant-Colonel Charles MacTaggart, I.M.S., Inspector-General of Prisons, United Provinces of Agra and Oudh; Major Leonard Rogers, I.M.S., professor of pathology at the Medical College, Calcutta, and bacteriologist to the Government of India; Major Henry Burden, I.M.S., residency surgeon in Nepal; Lieutenant-Colonel James Reed Roberts, I.M.S., residency surgeon in Indore and administrative medical officer in Central India; and Major Frederick Fenn Elwes, I.M.S., surgeon to the Governor of Madras.

The Royal Victorian Order includes the name of Colonel Charles James Bamber, I.M.S., Inspector-General of Civil Hospitals, Punjab, and a member of the Coronation Durbar committee, who receives the C.V.O.

Lieutenant-Colonel Charles Henry Bedford, I.M.S., chemical examiner, Bengal, has been made a Knight Bachelor.

The following officers have received the "Kaisar-i Hind Medal for Public Service in India" of the First Class:—Major Albert Elijah Walter, I.M.S., superintendent of the X-Ray Institute, Dehra Dun; Major Arthur Gwyther, I.M.S., civil surgeon, Howrah, and superintendent of the Howrah Jail; Surgeon Lieutenant-Colonel Thomas Joseph O'Donnell, K.G.F. Vols., V.D., lately chief medical officer Kolar Gold Fields; Captain Jasper Robert Joly Tyrrell, I.M.S., agency surgeon at Bhopawar, Central India; and Major William Hancock Tucker, I.M.S., district medical and sanitary officer, Coimbatore, Madras Presidency.

We offer, in the name of the medical profession, our hearty congratulations to all these gentlemen.

BRIDGWATER HOSPITAL.—The annual meeting of subscribers to this hospital was held recently. The financial statement showed that there was an unfavourable balance of £1132 against the charity. It was stated that a carnival will be held next summer in order to raise funds for the hospital. It was decided to raise a fund for building a new wing, as additional accommodation was much needed.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—May I beg the hospitality of your columns to publish as widely as possible the fact that it has been decided to hold a meeting of the medical profession at 4 o'clock on Tuesday afternoon, Dec. 19th, in the Queen's Hall, Langham-place. Sir W. Watson Cheyne has kindly consented to take the chair.

I would like to explain that this meeting will not concern itself in any formal manner with the recent action of the Council of the British Medical Association: it obviously arises out of that action, but as no possible good could come from discussing that point in public any further it will be entirely omitted from the meeting which is intended to be one open to the whole profession.

The objects of the meeting will be confined to: 1. Protesting against the Bill in its present form by a resolution probably on the lines of those which are now being proposed in various centres. 2. Strengthening the hands of all associations of medical men which are assisting in the same object.

It is earnestly hoped that as many medical men as possible throughout the Kingdom will do their very best to attend, as the present situation of the profession under the Bill as it stands seems to be very critical.

I am, Sir, yours faithfully,

Harley-street, W., Dec. 11th, 1911. FRED. J. SMITH.

To the Editor of THE LANCET.

SIR,—The Insurance Bill will undoubtedly in a few days become the Insurance Act. The British Medical Association undertook to negotiate with the Government for the medical profession. The time has now come when we are bound to ask what has been the outcome of these negotiations. Like other members of the British Medical Association, I have received a memorandum signed by the chairman of the Representative Meetings, and the chairman of the Council, dated Dec. 11th. It seems to express some satisfaction with the result of the action of the Council, but I think this satisfaction will be found to be enjoyed by the members of the Council only. It is needless to discuss the "six essential principles" of which we have heard so much. The great outstanding fact is that while the Bill declares exactly what the insured are to contribute and what sickness benefit they are to receive, the members of the medical profession who are called upon to afford "free medical attendance" are not informed how or how much they are to be paid for their services. Whatever value may attach to the "six essential principles" so dear to the Council of the British Medical Association, the great fact that looms large in the estimation of every practitioner in the country is that while the Bill demands from him an unknown amount of professional service, it makes no definite provision for his adequate payment. It is to the clearing up of this doubt and uncertainty that we should now devote all our attention, and whatever may be thought of the action of the Council in regard to other matters I myself feel that their great default has been in dissipating their strength upon minor matters, and leaving untouched and to be fought out with every Local Insurance Committee by smaller bodies of practitioners, seriously handicapped in the encounter, the one essential issue. Even yet much may be done if only the profession will hold together and are wisely led. I am, Sir, yours faithfully,

ALFRED PEARCE GOULD.

Queen Anne-street, Cavendish-square, W., Dec. 13th, 1911.

To the Editor of THE LANCET.

SIR,—The intense feeling which has in the last few days been stirred up against the Council of the British Medical Association appears to me to arise mainly from a want of knowledge of the real state of affairs. This feeling, if allowed to grow, will inevitably destroy the unity of the profession which has been so recently and so hardly achieved,

and this will render us powerless in the face of our opponents.

The facts of the case.—My own view as to the true state of affairs is as follows. The governing body of the Association is the representative meeting, an elected body which voices the feelings of the members in all the divisions and which declares the policy of the Association. The Council is the executive body which works out the details of the policy laid down by, and carries out the instructions of, the representative meeting. The policy of the Association, as declared by the representative meeting, has been arrived at only after careful consideration and after consulting the individual members in the divisions. Of course, with such an exceedingly complicated measure as the Insurance Bill it was impossible that there should be absolute unanimity in the views taken by the many thousands of members of the Association. In some cases the minority had to give way to the majority; in others divergent opinions were reconciled by taking an intermediate course. Thus the policy adopted was in the nature of a compromise amongst ourselves. But the net result was that in the end we did arrive at a policy on which we could all unite and which we could use as a common base from which to fight.

The policy adopted.—We agreed that we would not oppose the Bill at the outset, but that we should endeavour to have it amended and improved. We agreed on six cardinal principles which were to serve as the bedrock of our demands. We agreed that as many as possible of the points in these cardinal principles should be incorporated in the Bill, and that those which were not so incorporated we should insist on having provided in the regulations to be drawn up by the Commissioners. We agreed that if these six cardinal principles were not granted we would oppose, with all our power, the acceptance by medical men of the duties of providing medical attendance to the insured. With this end in view the majority of practitioners in the country signed a "pledge" to refuse to undertake the medical attendance of the insured under the Bill unless the six cardinal principles had been conceded.

An axiom.—In a voluntary association like ours, if we are to achieve any success by united action against powerful antagonists, we must take it as an axiom that where a minority has been constitutionally outvoted it must be willing to sink its minority views and to agree to act loyally with the majority in asserting the views that have been agreed upon for the general good.

Points of cleavage.—All through this adopted policy there appear what I may call points of cleavage when a number of members, sometimes from one section, sometimes from another, wished to take a line differing from that favoured by the majority. And when this has occurred, unless the minority is willing to fall in with the axiom I have just given, the Association will have its unity destroyed and as a power for enforcing the views of the whole body of members it will be reduced to impotence.

Let us look at some of these points of cleavage. First, there were a number of members who wished to have nothing to do with the Bill, and who were unwilling that we should take any part in endeavouring to improve the provisions of the Bill. These views have been negatived in the three successive representative meetings held this year. Then there were many who wished to have all the six cardinal principles embodied in the Bill itself. But this was recognised to be an impossibility. The policy, therefore, adopted by the representative meeting was that those points, which we could not get inserted in the Bill, were to be obtained in the regulations still to be framed by the Commissioners. Then, again, the "pledge" agreed to only referred to the medical treatment of those insured. Some men wanted a similar "pledge" to cover administrative posts under the Bill, such as Commissionerships. But when a resolution to this effect was proposed at the last representative meeting it was recognised that the passing of it would defeat our own objects, as unless we had satisfactory representation amongst the Commissioners we could not hope to have the regulations drafted to our satisfaction. This proposal was therefore, *with the consent of the meeting*, withdrawn.

What the Council have done.—From what I have said I think it is clear that the Council have so far faithfully carried out the instructions of, and the policy laid down by, the representative meeting. On the particular question which has raised all this dangerous storm—the appointment of Mr. Smith Whitaker—I would like to accentuate the fact that medical representation amongst the Commissioners is one of the points in the six cardinal principles for the granting of which we have been clamouring for the last seven months, and the withdrawal of the motion to apply the "pledge" to executive posts clearly implied, to me at least, that the representative meeting did not wish to hamper the Council in getting the best possible medical man appointed as a Commissioner. I have not yet heard it seriously suggested that we could get any better man for our purpose than Mr. Smith Whitaker. The idea of our Association being split into factions on the question of the precise method of the acceptance of this post would be absurd if it were not so serious.

The responsibility of the members.—If all those who have differed from the majority at any of the various points of cleavage are now to be added together as opponents of the policy of the Association, as adopted by the representative meeting, then, of course, we may find that they make a majority against this policy. But this method of working is absolutely contrary to the axiom I have propounded as essential to any satisfactory unity in the work of a voluntary association. That way lie anarchy and destruction. If the policy adopted by the Association be wrong, that is the fault of the members themselves or of their representatives. Certainly it is not the fault of the Council. I have heard it stated that the representative meeting is led by the nose by a few pushing members of the Council. This, of course, is absurd; but, even if it were true, it would still be the fault of the members for sending up such weaklings as representatives.

Danger of dissension.—Will not those who are forcing this split upon us realise, before it is too late, that they are simply playing the game of our opponents? It is idle to talk of the hasty formation of a new union at this stage in the fight. Even if it could be got ready as a fighting machine in time to be of any service, let us remember the old proverb about the danger of swapping horses when crossing the water. To attempt any new formation now is fatal, it simply means disunion and destruction. Our only strength is in unity. Our one weapon—first, last, and all the time—is refusal to undertake the treatment of the insured when the time comes. That weapon is as strong now as ever if we can only retain our unity. Those responsible for the Bill have been warned that we have this weapon ready, and that we shall not hesitate to use it. We are all of us justly indignant at the way we have been treated and our interests ignored by those who drafted the Bill. We are certainly united on the main issue, that we will not work the Bill unless the conditions offered are satisfactory to us. We can win, if we will only stand together. Why, then, because we are sore and irritated at the treatment we have received from others, should we lose our heads, quarrel amongst ourselves, and thus destroy our chances of success by a bitter disruption over questions which are, after all, only those of tactics and procedure?

I am, Sir, yours faithfully,

Harrow, Dec. 12th, 1911. ALFRED H. WILLIAMS.

To the Editor of THE LANCET.

SIR,—One can but regret that the admirable logic and wit of Dr. B. Hall is being wasted on a deservedly lost cause. If we pursue his argument to its conclusion, our practices would be so magically transformed by *per capita* payments that when we were busiest we should be saddest, and we should only be happy when we had no work to do. Would this state of mind really conduce to our patient's welfare, let alone our own? Much as we should all love to join with him in our client's tears and laughter, may I remind him that a good physician's duty to smile occurs precisely when the patient is weeping; and we are fortified in this difficult task by the knowledge that we are paid per attendance—i.e., per chortle. Dr. Hall's seems to be an individual and temperamental view; whereas the ordinary method of payment per attendance is based on the permanent springs of human nature, and rests on that fundamental community of interest underlying all fruitful labour—namely, the exchange of good individual work for good individual payment. Any transaction in which the payment is a known fixed sum and the work an unknown variable quantity stamps itself as a gamble. I recognise in

Dr. Hall a true sportsman, but I must persist in declining to join him in turning my actual occupation into a gamble against time and chance, with the dice loaded on the side of the State. Even without *per capita* payments a little philosophy will enable me to smile when the surgery is empty; and a little sympathy will enable me to present a cheery face when it is full, thus bettering Dr. Hall's attitude by dispensing altogether with the tears.

Dr. Hall and Mr. Penrose Williams must not suppose that their arguments are unanswerable nor that "silence gives consent." The arguments against *per capita* and for per attendance payments have appeared in abundance in our journals for months past; I would only add one out of many, if you have room for it, of a more general nature. Mr. Williams considers that "the one objection to the practice of medicine is the daily valuation of one's services." The art of medicine is, and always will remain, a mystery to the public, who do not know what we put into our bottles, and, if they did, would be equally ignorant of both of its commercial and therapeutic value. The public, therefore, have only two means of estimating the value of our services: (1) the apparent care we take of them, measured by our visits and their results; (2) the money they pay us per visit. Hence in their eyes their money is measured and balanced by our visits, which form a manifest measure of the value received by them.

What, in our consciences, is our aspect of the matter? We know that our medicines alone are commercially the smallest item, and therapeutically but a small item, in the things we give them; but our *visits* include our advice and care, and we add them to the credit balance as the major item in the ledgers of our conscience. In fact, our sense of honour compels us to earn the money of each visit by giving to each visit the utmost of our care. It is precisely the daily money valuation of our visits, to which Mr. Williams objects, which induces us to give value for money, because this value cannot, as in ordinary exchange and barter, be *exacted* from us by the buyer (*caveat emptor*), on account of his ignorance of the true items in what he is receiving. On the two standards by which he judges, what value will he place on services obtained for 4*s.* a year? He will value them just at four shillings' worth; and, what is more, he will eventually get just that value and no more, for in the long run services of unlimited scope so paid for will be corrupted and restricted so as to be of that value and no more. Can this be good doctoring?

The clients of most of us, from reasons of expense, only call us in when they need. Our existing practices are founded on this basis. "Free doctoring" at an annual fixed payment will reveal a tenfold number of calls, clients who had previously called me in only in emergencies, and according as they could pay, but who will now call me in in innumerable slight illnesses. (Mark that it is all one to me whether the illness is slight or severe; the time and care per attendance which I give them is substantially the same in all cases.) Hence my work will be enormously increased, and three consequences will inevitably attend the system. (*a*) Simple arithmetic on the census proves to me that I can at best, on a *per capita* basis, receive a less income than I now earn. (*b*) While to earn it I am bound to sacrifice all my leisure and health in impossibly enhanced work. Why should any of us accept, still less welcome, this *certain* prospect. It may be pure selfishness, but I prefer the present system of payment for work done, which applies to all other exchanges, and which leaves to both parties to the exchange the responsibility of freely exchanging the service for the payment from day to day. (*c*) This enormously enhanced work can only be coped with by an enormously enhanced number of doctors. Where are they? They do not exist; hence I must do the work of ten. The Chancellor began by admitting that "the doctors are an overworked profession"; can he be surprised that we decline to add to that existing heavy burden an enormously enhanced *new* burden of work?

This view of the problem is entirely apart from the sordid £ *s. d.* aspect, which even the *per capita* advocates, in their altruistic heights, cannot and do not ignore. Mr. Williams himself claims that "the whole thing for us turns on one point only, £ *s. d.*" When one considers the quality of work turned out by overworked people I think it will be admitted that we advocates of "payment per attendance" take a wider and more truly ethical view of the problem than our opponents. Pardon me for attempting to bring out clearly these two of the very many aspects of the problem; practical aspects which none of the opposing letters, admirable as they are in logic and theory, have even touched.

I am, Sir, yours faithfully,

Osmotherly, Nov. 30th, 1911. H. B. LUARD.

To the Editor of THE LANCET.

SIR,—Although thoroughly in accord with the professed object of the National Insurance Bill to protect the poorer classes against the evils of sickness and unemployment, I do not for one moment think that the proposed victimisation of the medical profession will serve that purpose. Surely in the fight against disease and death it is essential to the public welfare that the medical attendant should not only be well qualified, stimulated to most strenuous effort and unrestrained by handicap, but at the same time able to earn sufficient to maintain himself and his in honest independence. These conditions, I am quite certain, would not be fulfilled under a scheme which proposes to remunerate the medical attendant at so much a head. Such a scheme, on the contrary, would rapidly diminish the present number of competent men, and offer no encouragement for them to do their best.

The system of payment per head I have had considerable experience of, and I am quite convinced that it is radically wrong and unjust to patient and medical man alike. (1) The patient must employ for a time a practitioner in whom he may have no confidence; (2) the practitioner is obliged to continue attendance for a time on a patient who may make his life miserable and injure his reputation by neglecting to follow doctor's advice; (3) many, if not most, subscribers to sick clubs think that their weekly payment entitles them to call on their medical officer at any hour and for the most trivial ailments; (4) encouragement may be given to malinger; and (5) temptations to practitioners to scamp their work. These are a few of the evils pertaining to clubs paying capitation fees, and so far as I can see these deplorable evils are going to be accentuated by the proposed Act.

Therefore I thoroughly agree with the movement for demanding (1) complete liberty of choice between patient and practitioner; and (2) payment for services rendered and *not* per head. Contract practice on the lines of the National Deposit Friendly Society, however, is not quite in harmony with my ideas of sound and honest practice. Its moderate scale of fees might be accepted for poorer patients and modified for those in better circumstances, but it would be difficult, if not impossible, to draw a hard-and-fast line of income, as a curate, clerk, or small shopkeeper with £160 per annum might not be so well off as a mechanic with £2 per week. I am, Sir, yours faithfully,

JOHN DUNLOP, L.R.C.P. & S. Edin., &c.

Walthamstow, Dec. 8th, 1911.

To the Editor of THE LANCET.

SIR,—I am directed by the Salford and Broughton medical unions, which societies include practically every medical man practising in the borough of Salford, to forward to you a copy of the resolutions which were carried without a dissentient voice at their meeting held in Salford on the evening of Dec. 5th.—I am, Sir, yours faithfully,

STANLEY HODGSON,
Honorary Secretary, Salford Medical Union.

Salford, Dec. 6th, 1911.

This meeting is of opinion that the provisions of the National Insurance Bill as finally drafted do not incorporate the six cardinal points to which the profession unanimously pledged itself. That they do not secure effectual means whereby the practical working of the Bill can be carried out in absolute conformity with the principles of these six points. And therefore the Council of the British Medical Association should at once call upon all members of the profession to decline to form a panel or to undertake any duties which the Bill proposes to assign to them.

This meeting expresses its strong disapproval of the action of the Council of the British Medical Association and demands its resignation forthwith.

To the Editor of THE LANCET.

SIR,—I am a new member of the British Medical Association, having joined only a short time after the introduction of the National Insurance Bill. I have no personal acquaintance with the members of the Council, and I do not even know Mr. Smith Whitaker by sight. But I have been an interested student of the work done both by the Council and

the medical secretary since the Bill was printed, and as such I could scarcely fail to notice the conspicuous ability displayed in the various documents issued by them, and also in their negotiations with one of the keenest intellects of the present day.

I therefore look upon the appointment of Mr. Smith Whitaker as a happy augury for our future under the Bill His unrivalled knowledge of the profession and the conditions of practice in all parts of the United Kingdom; his special experience in insurance problems; and his tact, ability, and genius for administration and organisation, as shown in the high state of efficiency to which he has brought the British Medical Association, mark him as the man best of all suited for this high and important position. I think few would gainsay the assertion that if the choice had been given to the profession to elect its own man Mr. Smith Whitaker would easily have headed the poll. That being so, I think it is rather unfortunate that unworthy motives should be attributed to the Council in connexion with this appointment and the negotiations with the Government, and on this matter I am entirely in agreement with the views expressed in the leading article in your current issue (p. 1642). I fear this is hitting below the belt. The special representative meeting gave the Council the mandate to negotiate with the Chancellor of the Exchequer and also to use every influence with the Members of the House of Commons with a view to amend the Bill so that the six cardinal points could be secured to the profession. On what points can critics of the members of the Council indict them? What are the specific charges of failure brought against them on any one of those points? In considering the matter from this standpoint I think a careful perusal of the Bill, as amended in Committee, is highly advisable. It is with valid reason contended by the Council that the Bill in its amended form will enable the profession to obtain all those points, and, I believe, too, that any impartial legal tribunal would quickly come to the same conclusion.

For example, if the medical men in any administrative area, through their directly elected Local Medical Committee, decide that they will not accept service under the Act on the *per capita* system of payment, then payment for work done can be equally as well secured them by the present provisions of the Bill. If they in the same manner fix a minimum rate of wages above which they will not attend insured persons in that area the Bill enables them to have their way on this point also. Few, indeed, seem to grasp the true significance of those Local Medical Committees with their statutory right of being consulted by the Local Insurance Committees *according to regulations issued by the Insurance Commissioners* (the italics are mine). Truly those Committees are a splendid victory for the Association.

Then with regard to the free choice of doctor, we hopefully look to the deputy chairman to see that the Harmsworth amendment will not long remain either a grievance to the profession or a menace to real free choice. For if the regulations cannot assure this, then the Commissioners have the power vested in them to vary or alter the provisions of the Act so that it will work smoothly. Therefore I think we can feel quite easy on the point. Similarly, in regard to the early actuarial figures of 4*s.* or so for medical attendance, it should be made known at once that no such absurd figure can even be discussed by us. And in this regard, does anyone think that this most astute politician, Mr. Lloyd George, who nearly wrecked his health in getting this measure through, would ruin his reputation, destroy his party, and lose his popularity by passing a health insurance scheme that could only be worked by blacklegs? Or to think that Mr. Smith Whitaker would dishonour us and himself by taking office on such conditions! The thing is too absurd to seriously discuss. I certainly prefer to consider his appointment as a friendly act towards us, and as foreshadowing that the regulations, which he will have such a large share in framing, will amply satisfy the just demands of the profession and thereby give the public a truly efficient and national medical service.

Our one and only danger now is disunion, and it is therefore deplorable that some branches should seem to be inclined to adopt separatist tactics. That road leads to ruin and certain disaster, and to those whose thoughts turn that way no better recommendation could be given than to advise them to read the "Battle of the Clubs" (published by THE LANCET), and the report on "Contract Practice." This will put them in a frame of mind to reflect on what we have been, and what we might be again if we abandoned our present splendid organisation and destroyed that unity which now makes us so powerful.

I am, Sir, yours faithfully,

Mile End, E., Dec. 10th, 1911. M. S. HARFORD.

To the Editor of THE LANCET.

SIR,—Your attitude on this question is only what might be expected from the antecedents and prestige of our leading journal.

But apart from the utter unsuitability of the contract principle in its application to medical practice, there is in the provisions of the Bill one point which in its special bearing on the general practitioner seems to have hardly gained the attention it deserves. I speak of the transference of dispensing out of the hands of the practitioner into the hands of the dispensing chemist. Now, at first sight this seems a step in the right direction, for the compounding of drugs is not rightly our province, and in widely different circumstances I should welcome the change. But the chemist has about as much right to *prescribe*, as the doctor to *dispense;* and over the counter, and in the little room behind his shop he already has trespassed long on what is undoubtedly our legitimate domain, so that to transfer into his hands our only set-off against him is a manifest injustice.

I have throughout declared my adherence to the system of payment according to services, and on no account whatever shall I withdraw. The inherently vicious principle of contract, which the action of those who should know better has alone enabled the Chancellor to retain, ought to be rejected. This Bill is *not ours*, though it might be from much that has been done and said about it; it is Mr. Lloyd George's; and if he is unable to reduce to practice the principle which alone can make it acceptable to us, then, so far as we are concerned, there should be an end to the whole matter.

I am, Sir, yours faithfully,

Rotherham, Dec. 7th, 1911. HUBERT H. B. WILKINSON.

To the Editor of THE LANCET.

SIR,—In my letter to you in to-day's issue of THE LANCET a slight error has crept in which unfortunately quite alters the meaning of what I intended to convey. The item, "Mr. Lloyd George is *not* fully convinced that £4,500,000 is inadequate to achieve his beneficent objects," should read, "is *now* fully convinced."

I am, Sir, yours faithfully,

J. P. WALKER, M.D. Durh., D.P.H.,

Dec. 9th, 1911. Assistant County Medical Officer for Hants.

To the Editor of THE LANCET.

SIR,—The advocates of "payment for work done" seem to think that this method will ensure that we shall be paid a fair fee and that we are much more likely to get adequate remuneration than by the capitation payment. But I venture to think that when the fees are suggested they will be far from acceptable to the majority of practitioners and that a reaction will set in. The National Deposit Society is often referred to, but their statistics are quite misleading, and their fees ridiculously low. This society deals mostly with a class that has a low sickness-rate—the small tradespeople and the well-paid artisan. And the whole aim of this society is to cut down medical attendance by drawing from the member's deposit for payment

If payment for attendance is adopted in the insurance scheme there will be no inducement to curtail medical attendance, or to discourage malingering. Coddling and encouragement of imaginary diseases and trivial complaints would abound. The bills would startle the Insurance Committees and extra grants be applied for everywhere. Then the ratepayers would cry out and another method of payment would be insisted on. The medical profession would be accused of being "out for fees" and be discredited in the public eye. In this system there is less obvious inducement for the practitioner to warn the drunkard, restrain the gourmand, advise the careless, or improve the hygienic conditions than there would be in a capitation payment. The immense labour of book-keeping and sending in sick reports and bills would be a very serious matter.

Our profession has always been content to do a great amount of gratuitous and underpaid work, and we must recognise the fact that it will always be so. We get our

compensation in many ways. The money value of medical services cannot be estimated. All we ask for is a decent income. We can never expect any Government to guarantee all our ordinary fees for attending people under the income-tax limit or under the hoped-for £2-a-week limit. And this is what the advocates of "payment for attendance" are asking for. In "capitation" payment it is said that we take all the risk, and that in excessive sickness we should be the losers. But we must not forget that this cuts the other way, and in times of less sickness we get the same pay. Moreover, in localities with excessive sickness an extra grant could easily be made. We must remember that the capitation rate must vary in different districts unless allowance for mileage be an extra.

One of the great objections of "payment per attendance" is that the tariff of fees will tend to spread to private practice. I object to any fixed fees above a minimum. We must retain our freedom to charge what we think is a proper fee and not be bound to a scale. Contract practice is so associated in our minds with underpayment and unpleasant conditions that the name itself creates a great prejudice. But if we get better pay and are controlled by a body on which we are represented, and, moreover, if no individual bargaining is allowed and everything must be done by a Local Medical Committee elected by the profession, I fail to see any objection to it. At all events, it has got a firm hold all over the country and many are satisfied with it. No combined effort has been made to abolish it.

Can we blame the Chancellor for inferring that the system is so ingrained in our practice that a continuance, under better conditions, would be acceptable to us? Can we wonder if he asked his actuaries to work out the cost on a 6*s*. per head basis? In what other way could he have estimated the cost of his scheme? He has stated that the cost of medical attendance is unlimited. He knows that it will cost much more than 6*s*. But a low estimate must be made as in the case of Old Age Pensions, or the Bill would not go through. The Insurance Committees will know where they are if they pay on a capitation system. They would be content to pay a good fee per head rather than run the risks of the "per attendance" system. A fee of 8*s* 6*d*. per head and an extra 6*d*. for drugs would, according to my statistics for the past four years of club patients, pay in a country district. The fear that a capitation basis would encourage unnecessary calls upon the medical man will be no more real than it is at present, and every medical man knows how to stop that sort of thing, though it may take a year or two to educate the people up to the point of coming at proper hours. Some pointed admonition and combination among medical men would soon lessen the evil. It is a well-known fact that in certain districts where the medical men have protested against night calls there are very few of them. Even if an extra fee be paid for night calls every medical man would prefer to be without them.

In conclusion, I wish to emphasise that it is quite time that this controversy was settled, and that a definite decision was arrived at. For many months a special investigator has been collating statistics on contract practice and other matters. Surely he must have formed some ideas as to the "capitation" *versus* "per attendance" system? Let us settle this question and devote ourselves to other urgent matters. If we do not, I can see dissension in our ranks. In the Division of the British Medical Association in which I reside we are about equally divided on the question, and I believe it is so all over the country. I tremble to think what will happen when the Divisions have to decide this matter. It is far better to come to a general agreement. If all the arguments seem to favour a capitation fee, it is entirely owing to the fact that we have allowed this system to become established so strongly that it is impossible now to adopt any other. I am, Sir, yours faithfully,

Buckingham. ARTHUR E. LARKING.

To the Editor of THE LANCET.

SIR,—It is disappointing to find any doubt in the minds of medical men as to the policy of the British Medical Association in concurring in Mr. Smith Whitaker's appointment as Insurance Commissioner. I hope that after a little reflection the whole profession will feel unmixed satisfaction at this appointment.

Two things must be remembered, both of which, indeed, are recognised in your article of this week. First, there was to be a Medical Commissioner in any case. Is it better to have Mr. Smith Whitaker or Dr. X. Y. Z., whose attitude towards the Act might be nondescript or wobbly? Secondly, the sole and only *raison d'être* of the Medical Commissioner is that the views of the profession may be freely and ably represented on the Commission which will have the control of many important details in the working of the Act. I am not a member of the British Medical Association, but a comparatively slight personal acquaintance with Mr. Whitaker has taught me that when he has made up his mind he is not lightly swayed from a course of action. The Government has seen enough of him in recent months to know this; it cannot imagine that it will silence such an opponent by appointing him to a position which has been created on purpose that the very views he has already repeatedly stated may be officially represented. To seriously put forward the "bribery" theory is an insult to the intelligence of both the Government and the medical profession, even more than to the character of the new Commissioner.

The Association has technically departed from its position; but would it have been more tactful, more prudent, or more helpful to the profession had it objected to Mr. Smith Whitaker accepting the appointment? I feel that both Mr. Whitaker and the profession are to be heartily congratulated on an appointment which is also creditable to the Government's desire to hear the doctors' side.

I am, Sir, yours faithfully,

Norwood, S.E., Dec. 8th, 1911. S. W. CARRUTHERS.

To the Editor of THE LANCET.

SIR,—I am instructed to forward you the enclosed copy of a letter which has been sent by the Broughton Medical Union to the Members of Parliament for Manchester and Salford.

I am, Sir, yours faithfully,

R. B. FLETCHER, Hon. Secretary.

Manchester, Dec. 5th, 1911

The Broughton Medical Union.

DEAR SIR,—I am instructed to forward you the following copy of a resolution carried unanimously at a special meeting of the above union held on Dec. 1st, 1911.

That the Broughton and Salford Medical Unions, embracing practically all the registered medical practitioners in the county borough of Salford, earnestly request you to record your vote against the third reading of the National Insurance Bill as the six cardinal demands of the British Medical Association have not been embodied in the Bill.

Yours faithfully,

Manchester, N., Dec. 4th, 1911. R. B. FLETCHER, Hon. Sec.

To the Editor of THE LANCET.

SIR,—I have had sent to me by the honorary secretary of the Lambeth Division of the British Medical Association a series of circulars, asking me to become a member of that body, and to guarantee a sum in the future, with a proposed immediate payment of £1, towards a fund to carry on their struggle in connexion with the Insurance Bill, and finally threatening to brand me as "an enemy to the profession" if "I persist in refusing to commit myself to a definite statement of the profession's policy." I have written declining to agree to their requests. Is the policy of the British Medical Association "the profession's policy"? I doubt it very much. I consider the policy of the British Medical Association in connexion with the Insurance Bill anything but determined or satisfactory. It is a dallying policy, and their sanction to the appointment of their medical secretary to the post of "Deputy Chairman of Insurance Commissioners" before the six cardinal points they demand are conceded, stamps their policy as a "betrayal of trust." As to guaranteeing a sum in the future, I am not in a position to do so, if so inclined, and the threat to brand me as "an enemy to the profession" is most unjust, and amounts to nothing less than coercion. There is no more strenuous opponent of the Bill, as at present framed, than myself, and I have done, and will continue to do, all in my power to prevent it becoming law. I have brought before my patients my views on the subject, as you will see by the enclosed copies of notices placed in my surgery. I have asked each working man with whom I have come in contact for his opinion of the Bill, and, without exception, all expressed dissatisfaction—mostly in strong language. Under the Bill I should be compelled to give unsatisfactory work to my patients, and thus do away with any feeling of confidence

they may have had in their doctor. Those who accept office under the Bill must sooner or later realise that they are greater enemies to the profession than any who at present refuse to sign away their independence of action.

I am, Sir, yours faithfully,

ROBT. SAUNDERSON.

Rodney-road, Walworth, Dec. 11th, 1911.

*** Mr. Saunderson's statement concerning the Bill, posted in his surgery, is a vigorous plea for that freedom of relations between medical man and patient which he considers will be destroyed under the impending legislation.—ED. L.

To the Editor of THE LANCET.

SIR,—"Rural Practitioner" says he is absolutely convinced that the *per capita* system of payment is far and away the best and most "lucrative" in a rural district. Well, I have had 20 years' experience of a country practice and I am absolutely convinced that this system is "rotten to the core," bad for the doctor, and worse for the patient. It may under certain circumstances be the most lucrative system (though I think the word lucrative in this connexion is a peculiarly inappropriate one), but this is a matter of minor importance. Payment for work done, with proper safeguard against its possible abuse, is better for doctor and patient, though not necessarily better for the doctor's pocket. It means better work, and if the people of England and the leaders of the Friendly Societies could only be made to realise this all our difficulties would vanish.

I am, Sir, yours faithfully,

T. CUMING ASKIN, M.D. Dub.

Alderton, Woodbridge, Suffolk, Dec. 12th, 1911.

To the Editor of THE LANCET.

SIR,—I have been instructed by the Rossendale Medical Society to tender you their best thanks and appreciation for the kind way in which you have opened the columns of your journal to members of the medical profession in connexion with the National Insurance Bill.

I am, Sir, yours faithfully,

E. W. FALCONER, Honorary Secretary.

Stacksteads, Bacup, Dec. 6th, 1911.

To the Editor of THE LANCET.

SIR,—For nearly six months I have held myself in check and refrained from airing my views on the Insurance Bill in a letter to THE LANCET. It has been quite a struggle week after week to read the outpourings of others and myself keep silence. Whatever its intentions, I have all along disliked the Bill. I think it will upset my practice and land me in all kinds of troubles without giving me the least benefit in return. I have a mixed practice with some club work. I don't like the clubs, but they are useful. I object on principle to Friendly Society control, but I make the best of it. I regard it and club patients as necessary in my professional life, but I have a strong objection to extending the club system, under compulsion by Act of Parliament, to a large number of the patients of small means who are now upon my private list. The booking and collecting of small accounts is a nuisance, and there are many bad debts, but I prefer private patients. Moreover, if I give up dispensing for my smaller patients I shall have to discharge my dispenser, and perhaps lose that dispensing for my better class patients from which at present I derive part of my income. Again, the saleable value of my practice, in which I invested all my capital some years ago, will certainly diminish. Thus, from every point of view, I think the Bill detestable. I do not want it, and I never asked for it.

But when I hear all this commotion about insisting upon the "six cardinal points" and refusing to work if they are not all granted, I feel obliged to ask my colleagues whose work runs on the same sort of lines as my own (and there must be a vast number of them), do they realise the full meaning of each of these cardinal points for which they say they are so willing to strike? I am thinking in particular of "free choice of doctor," which seems to be the only demand which was immediately and willing granted by the astute Chancellor, and indeed the only point which he has substantially conceded.

I cannot imagine why we asked for this "free choice"—or why we allowed it to be made a "cardinal point." The Act will take so much away from me, why should it also rob me of my one little vested interest? With all their manifest drawbacks these clubs are now mine own and yield an assured income. With "free choice" they and the rest of my lower middle-class practice will be open to competition from all sides. Of all the silly things that have been noisily said and quietly accepted this "free choice" chatter seems to me the silliest.

The whole scheme is unpalatable. But why all this talk of "six cardinal points" when one at least of them has never been realised or even discussed? This is my first and only letter. We must know exactly what we mean to strike for before we talk of striking. At the present moment we are in a bad way, but with a little clear thinking and some sensible leadership we may yet pull through.

I am, Sir, yours faithfully,

Dec. 10th, 1911. RADIX.

To the Editor of THE LANCET.

SIR,—Surely it would have been more diplomatic and of much more service to the profession had Mr. Smith Whitaker refused the post of deputy chairman until the six cardinal points put forward by the British Medical Association had been granted.

Would it not have been better if the Council of the British Medical Association had sent to each member a circular explaining matters, and allowing them to discuss with their fellow members the offer of the appointment made to Mr. Smith Whitaker instead of the one sent excusing their having advised his acceptance of the post with such undue haste?

I am, Sir, yours faithfully,

Dec. 11th, 1911. TOWN PRACTITIONER.

To the Editor of THE LANCET.

SIR,—Having been for some 18 years a bookkeeper to the medical profession both in London and the provinces, I venture to think I can in a measure speak on some aspects of the Insurance Bill, shortly, it is feared, to become an Act. Despite all that has been said, it is doubtful if the profession fully realises the extent of the injury that this Bill may do to their practices. Most practices in which I have been engaged as bookkeeper relied to greater or less extent on the patients paying 3*s.* or 3*s.* 6*d.* per visit, and the male members of this class (with a certain number of women and domestic servants, both male and female) will now be turned wholesale into State-club patients paying 1*d.* or a little more per week. A glance at many ledgers will prove the havoc likely to result. This, however, is not all. In certain districts where Friendly Societies are grouped together and employ one medical man solely there is a provision in the Bill by which this grouping shall still continue, and if the Friendly Societies attract a large number of the State-club patients many patients will leave their present medical man who will receive nothing in return.

Only those who have worked in large club practices can realise what the profession will lose, not only financially but in standing, in return for very hard work. It is for the profession to have nothing to do with the Bill as it now stands.

I am, Sir, yours faithfully.

Dec 11th, 1911. ALIQUIS.

ELECTION OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—I wish to thank most sincerely those who voted for me at the last election as Direct Representative on the General Medical Council. I think I may almost call them my personal friends, as owing to circumstances which are not necessary now to detail, those who voted for me were directly or indirectly influenced by old associations and the fact that I have been connected with medical reform of the General Medical Council, and elsewhere, for a long period of years.

I also take the liberty of thinking that the principle of the judge not being the accuser, however indirectly, is a right one. All the Direct Representatives are now the nominees

of the British Medical Association, and as such will doubtless either have to act in the dual capacity, or have to retire from the Council when cases of great interest to the profession are brought before it.

I am, Sir, yours faithfully,

Plymouth, Dec. 4th, 1911. GEORGE JACKSON.

SANATORIUM TREATMENT FOR CHILDREN.

To the Editor of THE LANCET.

SIR,—Speaking on this subject at Cambridge in 1880, more especially with reference to hip disease, the late Mr. Timothy Holmes said [1]:—

> Who has not seen with profound sorrow poor children bandied about from one out-patient room to another, getting splints which only very imperfectly immobilise the joint or receiving injunctions to "keep at rest" which the surgeon knows cannot be carried out, till the limp becomes agonising pain and the patient is taken into hospital and allowed a little rest in bed? Then after a few weeks he is found to be occupying a bed which can be better employed; and his pain having for a time subsided he is turned out again. Possibly this process is more than once repeated, and then abscess forms; the joint is found to crepitate; and the surgeon probably knows that if he keep him in again for a few weeks and send him out relieved the disease will recur in a worse form; and so he recommends excision. I do not say that the surgeon is wrong in his advice under the circumstances, but I do say that the circumstances show our general hospitals to be places where chronic morbus coxarius can hardly be treated successfully.

Mr. Holmes died in 1907, and in an obituary notice the above passage is referred to with the painful comment that "the protest would be almost, if not quite, as much justified to-day as when it was uttered more than a quarter of a century ago."[2] The same year that the children lost Mr. Holmes they gained the Education (Administrative Provisions) Act of 1907, which gives the local education authorities power "to attend to the health" of the children.

When you, Sir, were asked as to the meaning of this you replied that "under these provisions we are of opinion that any county council may establish children's hospitals and convalescent homes at the seaside, provided they obtain the approval of the Board of Education."[3] Here, then, at last was the chance for the children, but the recent report of the chief medical officer of the Board of Education goes far to destroy this hope. After quoting Section 13 (which confers the power) the report (p. 124) goes on to say that—

> The power conferred by the section is not indiscriminate or promiscuous. In matters of construction it is necessary to consider the whole scope and purport of the Act, or series of Education Acts, in which the section occurs. From such a consideration it is reasonable to suppose that Parliament intended (*a*) that the powers of treatment under this section should be used for children who are in attendance at public elementary schools, and that therefore children whose state of health necessitates absence from school without any hope of returning, or whose state is such that they can only be effectively dealt with in permanent institutions other than schools, should be regarded as outside the scope of this section; (*b*) that the treatment supplied should be carried out in intimate connexion with the system of education and with the school; (*c*) that the maladies and conditions for which treatment is provided under this section should primarily be either such as are capable of amelioration in connexion with school life, or are conditions which are, generally speaking, characteristic of school children. Though the wording of the section is extremely general, it is in the interests of sound administration that these three considerations should be borne in mind.

This interpretation of the Act is probably not made without legal assistance; but it must be remembered that the only authoritative interpretation of an Act of Parliament is the decision of a judge, and further that on three important occasions recently the opinions of the law officers of the Crown have been at variance with those of the judges. With respect to the intentions of Parliament it may be here mentioned that when this section came up for discussion in the House of Commons it was pointed out that it would enable local education authorities to establish hospitals, and an amendment was moved; yet the amendment was withdrawn and the section passed as it stood, and still stands.[4]

When a child is absent from school on account of ill-health the attendance officer calls, and if the child is well enough orders, under threat of prosecution, that he be taken to be examined by the school doctor; if he be not well enough to go the school doctor, as I understand, does not go to see him; the child is excused from school attendance, his name is removed from the school register, and his existence possibly forgotten. Instead of this I submit the authority should instruct their doctor to go and see the child, and ascertain if he is under medical care, and if so, whether the medical attendant considers the circumstances are favourable to adequate treatment; very possibly the child cannot be sent to a sanatorium on account of the weekly charge the institution makes, and which the neighbourhood is too poor to raise; under these circumstances it would seem clear that the local education authority should exercise the power it possesses of paying in whole or in part for the child. It is true this can only be done with the consent of the Education Department, but there is no reason why the local authority should not play its part and leave the responsibility of veto where the law has placed it—at Whitehall.

If voluntary arrangements are, as they are said to be, inadequate, the above is the only way in which these children can be properly treated; the Poor-law is only for the destitute and the sanatoria of the Insurance Bill do not yet exist.

I am, Sir, yours faithfully,

Devonshire-place, W., Dec. 9th, 1911. WALTER EDMUNDS.

[1] Brit. Med. Jour., 1880, vol. ii., p. 257.
[2] Brit. Med. Jour., 1907, vol. ii., p. 705.
[3] THE LANCET, Nov. 30th, 1907.
[4] The Schoolmaster, August 10th, 1907.

THE DIAGNOSIS AND TREATMENT OF URINARY TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—My attention has been called to an interesting address to the Harveian Society on the above subject by Dr. Samuel West, and published in your issue of Nov. 11th, p. 1318. He claims that the disease is difficult to diagnose in the early stage. In this I fear I cannot agree; and with regard to treatment he practically advocates a do-nothing policy, completely contrary to the teaching of modern surgery, and to a considerable extent based upon the belief, not supported by facts, that renal tuberculosis is in the great majority of cases bilateral early in the history of the disease. And in the last paragraph he says: "All that I wish now to do is to protest against regarding the removal of a tubercular kidney as an operation to be lightly decided on. It is a very grave act, requiring the most serious consideration and in all cases involving grave risks. The very ease and success with which the mere operation can now be done renders this caution, I think, the more necessary. The question is not whether the operation can be safely and successfully done, but what will be the condition of the patient afterwards, and how far his chances of life will be altered for better or worse." Every careful surgeon will accept this general statement of opinion, but he will also remember that in the present position of renal surgery there is as great responsibility in refusing an operation as in advising one, and that by adopting the former course during the time that elapses between the onset of the disease in the kidney and the invasion of other parts the surgeon may allow to escape a valuable opportunity of saving the life of his patient. Since physicians have come to appreciate the value of recognising urinary tuberculosis at an early stage the results obtained by the surgeon have greatly improved.

Now by bacteriological examination of the urine, inoculation experiments, segregation of the urine, and the employment of the cystoscope the surgeon can obtain objective proof of the presence of tuberculosis in the urinary tract long before the subjective evidence is sufficient to justify a diagnosis. "Unfortunately, when a patient is not suffering much actual pain or serious inconvenience it is difficult to convince him of the seriousness of his condition, but in all cases of primary renal tuberculosis the problem must be seriously placed before him and nephrectomy advised."[1] The diagnosis I find can often be made so early in the history of the case that the surgeon is beset with difficulty. He has proof of the presence of tuberculosis in the kidney, but the patient suffers so little, and his general health is so excellent, that it is difficult to convince him of the impending danger of his position.

Primary nephrectomy is now looked upon by urologists as the only remedy, and is resorted to when the disease is known to be limited to one kidney; and this can be determined with considerable accuracy by ordinary diagnostic methods, aided by cystoscopic examination and bacteriological research. I am sorry Dr. West does not give any evidence to support his statements. I may say

[1] The Surgical Aspects of Early Renal Tuberculosis, by the writer, The Practitioner, July, 1911.

that I collected statistics of operations in all stages of the disease[2] published from 1891 to 1908, and found that during that period lumbar nephrectomy for tuberculous disease gave a mortality of 27·4 per cent. and abdominal nephrectomy 33 per cent. Now we find that when the disease is limited to one side and there is no tuberculous disease elsewhere, nephrectomy results in cure in 30 per cent., with an operative mortality of about 10 per cent. This is taking general statistics, but in the hands of surgeons of great experience the cures are in a larger proportion, and the mortality is about one-half—namely, 5·8 per cent. I may now take Walker's statistics,[3] giving the remote results in 210 cases of nephrectomy: Reported as well, 79 cases; recovered, 83 cases; cured, 20 cases; good results, 4 cases; improved, 7 cases; not improved, 2 cases; improvement not maintained, 15 cases. I think it will be admitted that these statistics convey a different impression from that contained in the remarks made in Dr. West's address.

Further, Dr. West says, "When the disease in one kidney is advanced enough to be capable of certain diagnosis the chances of the other kidney being affected too are very considerable ....." This depends, of course, upon the methods employed in making the diagnosis and the stage at which the disease is detected, but let that pass, and permit me to quote a passage from Watson and Cunningham[4]:—

> Clinical evidence of unilateral renal tuberculous infection.—The testimony of this nature upon the unilateral occurrence of renal tuberculosis is derived from, and based upon, the examinations of the urines drawn separately from each of the two kidneys, and from the facts with regard to permanency of the cures or entire absence of evidence of the existence of renal tuberculosis subsequent to nephrectomy of the kidney which is known to be invaded by it. Upon the evidence of this character, such surgeons as Krönlein, Israel, Kümmel, Rafin, Kelly, Bevan, Reynaud, Casper, and Hurry Fenwick assert that the process, at the time at which the patients were examined by them, was confined to one kidney in from 50 to 80 per cent. of the cases.

Or, taking the disease not at the stage when it should be presented to the surgeon, but when it has done its worst and has come under the review of the morbid anatomist rather than the clinical pathologist, Halle and Motz[5] found in 131 cases of renal and ureteral tuberculosis examined by them post mortem, in 89 the disease was confined to one side, in 42 it was bilateral.

I think it right to place these facts before the readers of THE LANCET to justify the position I have maintained that—

> It is to the diagnosis of tuberculosis in the early stage that we must especially direct our attention, seeing that in its later developments the aid of the surgeon is of little avail.[6]

And—

> In some instances when first seen by him [the surgeon] the disease is so advanced that little can be attempted to stay its progress or to mitigate the suffering of the patient, while in other cases the malady is still limited in extent, and much may be done by early surgical intervention. Even a few years ago renal tuberculosis was looked upon as almost a certainly fatal malady, but now that new and more exact methods can be employed in detecting the disease in the early stage, the surgeon is not uncommonly placed in a position to advise and to carry out operative measures with considerable hope of success.[7]

I am, Sir, yours faithfully,

Glasgow, Dec. 2nd, 1911. DAVID NEWMAN.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

To the Editor of THE LANCET.

SIR,—In Mr. S. G. Longworth's letter in your issue of Dec. 2nd it is stated that "according to Dr. George Oliver and others, the point to take [for the reading of the diastolic pressure] is that at which a distinct change in the intensity of the sound occurs, which is generally pronounced and limited to 1 or 2 mm. of the scale." So far as I am concerned, your correspondent is under a misapprehension. The later results of my observations, which appeared in the *Quarterly Journal of Experimental Physiology*, March 3rd, 1911, support the view of Ettinger, Gettings, and others to the effect that the disappearance of the throb on release of air-pressure indicates the minimum arterial pressure. I said: "If we accept the lower limit of throb as the indicator of the true diastolic or minimum pressure, then the range of throb furnishes three readings of the arterial blood pressure—namely, those of the minimum, the mean, and the maximum pressure. ..... Observation shows that the mid-reading coincides, as a rule, with the optimum oscillation of the mercurial column, which has hitherto been accepted as the indication of the diastolic pressure. We do not, however, know what the maximum oscillation as an indicator of arterial blood pressure actually does signify, and it is not improbable that further observation will show that it represents more nearly the mean arterial pressure rather than the true diastolic pressure." The diastolic pressure definitely afforded by the disappearance of the throb has not yet been studied and appreciated sufficiently in clinical work.

I am, Sir, yours faithfully,

Farnham, Dec. 10th, 1911. GEORGE OLIVER.

[2] Article, Operations on the Kidneys and Ureters, Burghard's Operative Surgery, vol. iii., p. 403.
[3] Quoted by Watson and Cunningham, vol. ii., p. 401.
[4] Diseases and Surgery of the Genito-Urinary System, vol. ii., p. 390.
[5] Annales des Maladies des Organes Génito-Urinaires, Paris, 1906, xxiv., 161-241.
[6] Surgical Diseases of the Kidney, 1888, p. 295.
[7] THE LANCET, 1900, vol. i., p. 526.

THE PRACTICE OF MEDICINE IN BRITISH COLUMBIA.

To the Editor of THE LANCET.

SIR,—As I think considerable misapprehension exists in the British Isles in regards to the conditions of medical practice prevailing here, I venture to call attention to certain facts in the hope that the information may be a help to others. Before I arrived here I was firmly convinced that my Edinburgh qualifications would be sufficient to enable me to practise medicine here. I thought I had merely to hang up a blass plate and the patients would come flocking in. This is, however, not the case. In British Columbia and in Alberta, as I believe in all the provinces in the Dominion of Canada, there is a medical examination. This is open to any medical man or woman who has studied medicine for a minimum of four years at a recognised medical school and obtained his diploma. Nobody is allowed to practise in British Columbia or in Alberta until he or she has passed this examination.

It would appear that almost complete ignorance prevails at home with regard to this examination, and it is entirely erroneous to consider it as anything but a severe test of knowledge. In British Columbia the examination lasts for the better part of two weeks, and papers are set in all the subjects in the average medical course, with the exception of biology and physics. Clinicals and orals are conducted in medicine and surgery, as well as an examination in practical bacteriology and in clinical methods. The examination is a thoroughly fair test of knowledge and is practical, as the examiners are, without exception, either specialists in the subjects in which they examine or general practitioners.

In May there were 42 candidates, of whom 19 failed, and this month 62 made their appearance, and 23 were unsuccessful. In each examination several candidates with qualifications from the British Isles were unsuccessful. In both May and this month an Edinburgh graduate failed to qualify, and two or three London College men were among those rejected. Now these were in every case quite good men, and the reason of their failure was owing to their ignorance of prevailing conditions. They had read or been told that the examination was a mere formality, and had regarded it as such. For my own part I arrived in British Columbia two full months before the examination last May, and devoted the time to reading. Despite this fact, and the experience I had gained as a house physician and surgeon in Edinburgh, I was by no means certain of the result until the lists appeared. In Alberta the conditions are similar, although there are no oral and clinical examinations.

We have here a wonderful country and one that will loom largely in the future history of the world. It is undoubtedly a land of promise, and conditions of practice are very much more favourable than in the British Isles. "Old Country" graduates are always welcome here, not only among the general public, but also among our Canadian colleagues, and it seems to me a pity that men who are undoubtedly skilled practitioners should fail at an examination when a little extra preparation would entirely alter the result.

Although this is in every way a very favourable country in which to practise medicine, money is not made with quite that rapidity which many expect. A certain amount of capital is necessary. In Vancouver, with any reasonable success, $1500 should be made in the first year. In the smaller towns and in the Kootenay and the Cariboo fees are

larger, and most of the doctors make their expenses from the start. In any case practitioners should be prepared to wait for a few months at least, and it would be well if this fact were understood. Then we would not be faced with the spectacle of an "Old Country" graduate arriving with some $170 as his entire assets. Even this might be overcome if he succeeded in satisfying his examiners, but in default it means a nearer acquaintance with a pick and shovel or other form of manual labour.

In conclusion, I would say that I shall at any time be delighted to answer any communication I may receive regarding this undoubtedly wonderful country with its endless opportunities.

I am, Sir, yours faithfully,

GEORGE GIBSON, M.D., M.R.C.P. Edin.

724, Robson-street, Vancouver, B.C., Nov. 14th, 1911.

*** We may mention, in regard to the above interesting letter, that in an article on "The British Medical Man Abroad"[1] it is stated that an examination has to be passed before a qualified person is admitted to the Register in British Columbia and Alberta.—ED. L.

THE STATISTICS OF THE BENENDEN SANATORIUM.

To the Editor of THE LANCET.

SIR,—In a recent publication, "Sanatoria for the People,"[2] the authors, Mr. C. H. Garland and Dr. T. D. Lister, have made some very definite statements regarding the results of the treatment of tuberculosis in the Benenden Sanatorium. They state (pp. 16 and 17) that "as a matter of accumulated experience, the successful cases wherein the disease becomes completely arrested are about 70 to 80 per cent. of the admissions," and further that "with patients able and willing to continue their working lives under simple hygienic modifications, 80 per cent. are found to be still on full work and wage-earning two years after discharge; and as knowledge spreads among the working classes, as shown by the German insurance experience, the lasting nature of the recovery tends to increase. Statistical evidence will be found in Appendix II."

I have carefully examined the figures given in Appendix II., and so far as I understand them can find none which appear to provide the above percentages. It is obviously of the highest importance that data in publications of this kind, directly intended to influence public opinion, should be so expressed as to be intelligible to the layman. May I therefore as a layman ask the authors to explain how they reach these percentages?—I am, Sir, yours faithfully,

DAVID HERON.

Galton Eugenics Laboratory, University College, Gower-street, W.C., Dec. 12th, 1911.

THE PRESCRIPTION OF TUBERCULIN.

To the Editor of THE LANCET.

SIR,—Mr. P. W. Squire's memorandum attached to the letter of Sir R. Douglas Powell and Dr. P. Horton-Smith Hartley appears to confuse rather than settle the issue raised by your reviewer. The review stated that instead of representing the small initial dose of T.R. by "0·000,000,001 cubic centimetre," "a more convenient method would seem to be to express the amount in fractions of a milligramme." Your reviewer will doubtless make his meaning clear, but workers with tuberculin would understand this to mean vulgar fractions of a milligramme of tubercle bacilli, not fractions of a milligramme of T.R. liquid, as assumed by Mr. Squire.

The point raised by your reviewer is sufficiently important to be illustrated by experience. I have made an examination of the 1000 last orders received by Messrs. Allen and Hanburys for T.R. and B.E. (the two forms of tuberculin to which the alternative method of stating the dose applies), and find that on 912 orders the dose is stated in vulgar fractions of a milligramme of tubercle bacilli, and in 23 cases in decimal fractions of a cubic centimetre of the concentrated liquid. On all Messrs. Allen and Hanburys' labels the dose is stated in both forms—e.g., "New Tuberculin T.R. 0·000,001 c.c. (1/100,000 milligramme T.B.)"; physicians can therefore employ the system they prefer without trouble. Although precedence is given on the label to the decimal method of stating the dose now used by the makers of Koch's tuberculins, on 91·2 per cent. of the orders received the doses are written in vulgar fractions of a milligramme of tubercle bacilli. I think it must therefore be conceded that the latter is the more popular and presumably the more convenient way. I am, Sir, yours faithfully,

F. W. GAMBLE,

Pharmaceutical Chemist; Examiner to the Pharmaceutical Society; Manager, Allen and Hanburys, Ltd.

Vere-street, W., Dec. 11th, 1911.

[1] THE LANCET, Sept. 2nd, 1911, p. 713.
[2] The Scientific Press, Limited, 1911.

A PLEA FOR AN AMENDED CLASSIFICATION OF UTERINE FIBROIDS.

To the Editor of THE LANCET.

SIR,—Permit me space to make a suggestion as to the amendment of the usual description of fibroid tumours of the uterus in regard to their position in the uterine wall. Hitherto hard and soft fibromata of the uterine wall have been described as submucous, mural, and subserous. The submucous fibroid is occasionally pedunculated; the subserous is more often so. The foregoing classification was strictly anatomical. What I now propose is a classification which, whilst being anatomical, is in every sense of the term clinical as to pathology and treatment. I will now briefly explain.

Most uterine fibroids are placed either inside or outside the centre of the middle coat, which is occupied by the larger blood-vessels supplying the uterine wall. The classification I now propose is to locate every uterine fibroid, anatomically and clinically, either on the inner or the outer aspect of the central vascular zone of the middle coat. Anatomically, therefore, one would speak of an "inner" and an "outer" fibroid, sessile or pedunculated, in strict relation to the central vascular zone of the middle coat of the uterus, because this classification, from a clinical point of view, can be shown to be important. I have so often seen a uterus which is the subject of multiple fibroids have all of them confined either to the inner or the outer side of this vascular zone of the middle coat, that I begin to think that there must be some developmental rule why this should be; because if a uterus is found to have a so-called subserous fibroid and this is accompanied by other smaller ones they will almost invariably be found on the peritoneal side of the central vascular zone of the middle coat. The same applies to the submucous fibroid; seldom does one see fibroids on both the inner and the outer side of the vascular zone of the middle coat simultaneously. The clinical pathology of the proposed classification of these tumours is interesting and shows a strong contrast in their behaviour.

No gynæcologist of any experience but must have seen a case of severe hæmorrhage from a fibroid uterus, endangering life and often causing death, yet after hysterectomy or post mortem, on laying open the uterus, no point or punctured blood-vessel can be found anywhere to account for the hæmorrhage, the uterine mucous membrane over the tumour appearing merely congested. In conversation with Mr. Shattock, of the Royal College of Surgeons Museum, he very aptly described this hæmorrhage as "uterine epistaxis." This hæmorrhage or epistaxis in my experience is only caused by fibroids situated in the uterine wall on the *inner side* of the central vascular zone of the middle coat of the uterine wall, the salient factor not being that the fibroid is a so-called "submucous" fibroid, but that it is "internal" to the vascular zone in the middle coat of the uterus. How the hæmorrhage is caused can be briefly explained. The fibres of the middle coat outside the vascular zone and all the fibres of the outer coat when the fibroid has reached such a size that by their contraction they can compress the whole vascular circulation against the fibroid, cause an intense venous stasis of the mucosa, more especially over the tumour. And so we have established a hæmorrhage very much like that which occurs in the stomach after gastro-duodenostomy and other abdominal operations; in other words, a true epistaxis which may or may not be fatal. This *inner fibroid* is also liable, in the event of a miscarriage occurring in the early months of an existing pregnancy, especially if the placental site be over the tumour, to become

displaced inwards as a partially pedunculated tumour by uterine contraction, be presented at the os and cause death from hæmorrhage unless its presence and clinical significance are recognised and the tumour rapidly enucleated and delivered per os. A medical colleague recently informed me of a patient of his who died from hæmorrhage from this very cause in a well-known London hospital for women.

Uterine fibroids, on the other hand, situated "external" to the central vascular zone of the middle coat of the uterine wall, do not give rise to uterine hæmorrhage, whether sessile or pedunculated, for very obvious reasons, because contraction of any muscular fibres external to them does not compress the venous channels in the middle coat. Reverting to "inner fibroids," my experience leads me to class them as to their liability to produce hæmorrhage by their situation in the uterine wall. Fibroids situated below a line joining the insertion of the Fallopian tubes are more liable to produce hæmorrhage of the kind described than fundal fibroids. Of those situated below the insertion of the Fallopian tubes, lateral cornual tumours are most prone to cause hæmorrhage, because the efferent vessels of the uterus emerge here; then tumours in the cervix and anterior wall, then tumours in the posterior wall; and lastly, and least, fundal tumours.

Finally, from the clinical-operative point of view, the classification I propose as "inner" and "outer" fibroids has a practical bearing on treatment, because the probability is that where a uterus is the subject of an "outer fibroid," any others will all be found external to the vascular zone of the uterus, and can on abdominal section be removed by myomectomy without fear of hæmorrhage. This will permit us to leave the uterus, perhaps enabling the patient to become subsequently a happy mother. On the other hand, uterine fibroids situated internal to the vascular zone can be removed without much hæmorrhage by dilatation of the cervix, with or without splitting of the anterior lip, by blunt dissection out of the uterine wall with the fingers and dissector or by previous *morcellement*, followed by enucleation and delivery, which I have repeatedly successfully done, even treating tumours as much as 5 lb. in weight. This latter procedure also leaves the woman with the power of subsequently becoming a mother.

I am, Sir, yours faithfully,

F. W. FORBES-ROSS, M.D.Edin., F.R.C.S. Eng.

Harley-street, W., Nov. 29th, 1911.

DREAMS.

To the Editor of THE LANCET

SIR,—In an annotation in this week's LANCET upon Mr. Havelock Ellis's book on dreams you quote the late Sir Samuel Wilks's remark that "the dreamer merely forms a mental picture, and the description of it he calls his dream." To my mind, however, the question how we form "a mental picture" still waits for a reply. Each individual among us, as the late Sir Francis Galton remarked, is a composite cellular creature made up of a bi-parental half, a grand-parental quarter, and the residue of definite fractional parts of earlier forebears. We also believe that the chromosomes, "the individual entities" as Mr. C. E. Walker calls them, "are distributed from cell generation to cell generation, from parents to offspring in a manner that coincides exactly with the behaviour of the individual characters." ("Hereditary Characters," p. 213.)

Now as regards dreams during "the solemn watches of the night," I have often recalled visions of my parents, seldom of my paternal grandfather, more frequently of my maternal grandfather, whom I personally resemble in many respects, and occasionally of my dead son. According to biometricians, there are twice as many molecules (or atoms or ions) in my body that have directly sprung from my two parents as there are others originating in my four grand-parents. The chances of a parental atom knocking at the portals of my sleeping brain, and in that way exciting a "mental picture," are therefore many times greater than are those affecting a grand-parental atom. This suggestion, I fancy, accounts in my case for the repeated dreaming of parents. It would be interesting to know whether my experience coincides with that of others. I have been led into this train of thought through another experience. On two or more occasions I have indulged in a hearty meal of under-done beef late in the evening, and have gone to rest shortly afterwards. I have notes of two dreams after such a meal, written soon after the event. In each dream I was crossing an open space, when suddenly savage-looking cattle obstructed my path, and I took to my heels, to awake in a cold sweat, with an uncomfortable sensation in my head and—stomach! Is it possible that here we have the Machiavellian stimulus of a semi-devitalised ox-cell upon my dormant cerebrum? I am, Sir, yours faithfully,

Hove, Dec. 9th, 1911. W. AINSLIE HOLLIS.

UNIVERSITY AND COLLEGE REFORM.

To the Editor of THE LANCET.

SIR,—May I state with regard to your short account of the meeting of the Fellows and Members of the Royal College of Surgeons of England, published in THE LANCET of Nov. 25th, that I did not venture to "prophesy" what the Royal Commission on University Education in London would or would not do. I just warned the Council *not* to rely solely upon the side issues (to them) of the numerous University regulations or the extraneous representations of the Polytechnic or Royal College of Science or other bodies, and which the Royal Commissioners were chiefly considering. No doubt my motion with regard to the M.D. and M.B., B.S. degrees and the Conjoint Examination Board of the Royal Colleges has occupied, and still does occupy, the attention of the Council on behalf of the Fellows and Members—a vital point for their future welfare; and so far there was no actual need to carry my division on the motion over again, since it was passed before on a similar resolution. But what is, is! And the Council would do well either at once to obtain the power of this Act themselves, or when they go before the Commissioners to let them understand they intend to seek these particular rights of examining for a degree, under their compact with the University of London and under the Act of 1898, but which lately the University of London has so carelessly and selfishly denied to them and to her partner. There is nothing to prevent this action, nor to hinder the Council from moving for a confirmatory Act.

The differences between the above views and those of the present President, Mr. Godlee, under the discarded Jenner and Westminster schemes, may certainly be judged to be reconciled. Indeed, it would be auspicious if his tenure of office coincided with his being able to pre-eminently carry out what he and other reformers, *and now the University and college reformers*, have aimed at on the common ground of a degree basis instead of the obsolete licences.

I am, Sir, yours faithfully

Dec. 7th, 1911. H. ELLIOT-BLAKE.

*** Mr. Elliot-Blake is advocating the granting of degrees by the Colleges in conjunction with the University.—ED. L.

PRESSURE-PAIN SENSIBILITY IN FACE AND TONGUE.

To the Editor of THE LANCET.

SIR,—In connexion with your annotation on this subject in THE LANCET of Nov. 18th, may I point out that two of the statements made by Dr. Maloney and Dr. Foster Kennedy are in excess of ascertained facts? They write thus of the hypoglossal nerve:[1] "It is probably a pure motor nerve in its peripheral course"; again, "The hypoglossal appears to be a purely motor trunk." They also write of "the purely motor function of the seventh nerve after it leaves the Fallopian canal." But all that their excellent research established on these two points was that these two nerves contain no pressure-pain sensibility fibres in those parts of their course. We are almost certain, however, that the main twelfth trunk and the six facial branches peripherad of the stylo-mastoid foramen contain postural afferent nerve fibres for the tongue muscles and the facial muscles respectively, because Professor Van Gehuchten found by experiment[2] that in the rabbit the peripheral seventh nerve at the stylo-mastoid foramen contains afferent fibres which rise in some of the cells of the geniculate ganglion; and also Professor Sherrington found in 1894[3]

[1] Brain, September, 1911, pp. 23 and 26.
[2] Journal de Neurologie, 1898.
[3] Journal of Physiology, vol. xvii., p. 255.

that the hypoglossal was one of several nerves mentioned by him "which contain abundance of fibres from sensory ganglia."

In my opinion, the present position of our knowledge, which is, however, incomplete in several directions, justifies the following provisional conclusions: (1) all the pressure-pain sensibility fibres of the tongue enter the organ by the communicating branches between the lingual branch of the mandibular nerve and the anterior part of the hypoglossal nerve; (2) possibly a few postural afferent fibres also enter by that path; (3) most, if not all, of the postural tongue muscle afferents enter the organ by the main hypoglossal trunk, probably from the second and third cervical dorsal root ganglia; (4) all the pressure-pain sensibility fibres for the facial muscles enter by the communicating branches on the face between the fifth and the seventh nerves; (5) some of the postural afferent fibres for these muscles probably also enter by these branches, in witness whereof I may refer to Dr. Harvey Cushing's well-known findings of postural facial palsy after Gasserianectomy in some cases; (6) most of the postural afferent fibres to the facial muscles rise in cells of the geniculate ganglion, and enter the muscles by the six peripheral facial trunks.

I have in this letter touched merely the fringe of this subject. I hope to show subsequently that all these points, and many more, can be studied, and in a large measure settled, by properly planned experimentation reinforced occasionally, as opportunity occurs, by pathological study.

I am, Sir, yours faithfully,

LEONARD J. KIDD, M.D.

Haverstock Hill, N.W., Dec. 2nd, 1911.

SANITATION AND SEWAGE DISPOSAL AT LEEDS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

LEEDS holds a good position among our largest towns so far as vital statistics are concerned. Perhaps the most remarkable figures are those that relate to the mortality from scarlet fever. In the "seventies" the death-rate from this disease occurred in the proportion of 1·11 per 1000, in the "eighties" it fell to 0·68 per 1000, in the "nineties" to 0·19 per 1000, while the average from 1900 to 1909 was only 0·11 per 1000. Yet it can hardly be said that vast public works have been pressed forward so as to better the sanitary conditions of the city.

Back-to-back Houses: the Rent and the Death-rate.

The building of back-to-back houses has, unfortunately, not been radically abolished, yet Dr. L. W. Darra Mair's report to the Local Government Board (Cd. 5314, 1910) on back-to-back houses was very conclusive. This official document gives the results of investigations in Leeds and 12 other industrial towns of the West Riding of Yorkshire. Care was taken to separate houses in good condition and in healthy localities from those less favourably situated. It was found that where back-to-back houses are built in continuous rows, even though they are of a relatively good type, the death-rate from all causes is from 15 to 20 per cent. higher than in ordinary houses which have windows both in front and behind. Such is the advantage of through ventilation and the purifying effects of light on both sides of the houses.

The inhabitants of back-to-back houses suffer especially from diseases of the chest and defective growth in childhood. The aged and the young are the principal victims. But the rents of such dwellings are one-fifth cheaper than ordinary houses of equal size and affording the same accommodation. The increase in the death-rate is about in the same proportion as the decrease in the rent paid for back-to-back houses. In other words, where back-to-back houses are replaced by houses with through ventilation a death-rate of 20 per 1000 per annum would be reduced to a death-rate of 16 per 1000 per annum. Of those who die in back-to-back houses, 20 per cent.—one-fifth, or 1 out of 5—are brought prematurely to the grave to save 4*s.* in the £ paid for rent.

In 1893 the Leeds Corporation obtained permission to allow the building of more back-to-back houses. The injury resulting from this mode of construction was not then as fully appreciated as it is to-day, nevertheless it was well known that such houses were comparatively unhealthy. But then there was the saving of money, so the corporation was left free to decide whether under certain conditions and restrictions builders should be allowed to construct yet more and more back-to-back houses. The chief hope now is that under the Housing and Town Planning Act of 1909 this harmful practice will be definitely stopped.

Wholesale Testing of Drains.

If the corporation is thus unprogressive in allowing such houses to be built, the sanitary authorities have displayed commendable energy in the inspection of inhabited dwellings. More than 18,000 houses are inspected in the course of the year, and this does not imply just a passing visit, but the thorough overhauling of the entire premises. Thus the air space and means of ventilation are noted, and the drains are not only outwardly examined but tested. Such methods revealed last year no less than 3955 defects or leakages in drains. This is really most important, because the fact that the closets are kept clean and that there is no noticeable odour does not prove that the drains are absolutely water- and air-tight. The scavenging department also seems to be very active, and altogether it appears likely that the low death-rate enjoyed at Leeds is due rather to careful attention to details than to any large sanitary measure or scheme.

Pollution of the River Aire.

So far as any great undertaking is concerned, Leeds is best known on account of its extensive experiments and works for the disposal of sewage. The last Census shows that Leeds has a population of 443,568 and stretches over an area of 21,572 acres. Considering that there are also many industries and no large river or sea front where the crude sewage can be discharged, it will be seen that it must be very difficult to dispose of the sewage satisfactorily. It was in 1848 that sewers were first built at Leeds, and then the crude sewage was allowed to flow into the small river Aire at Knostrop, which is about two miles south-east of the town-hall. This practice continued until 1870 when an injunction was obtained, and the corporation of Leeds was ordered to stop the nuisance. Four years were now devoted to experiments, and then settling tanks were built. By mixing chemicals with the sewage a sludge was obtained and a clearer and cleaner water thrown into the river. But if this was an improvement the results were still far from satisfactory. In 1893 the West Riding Rivers Board was constituted to act on behalf of those who were interested in the prevention of the pollution of rivers. In the course of time, certainly not with any reckless or undue haste, but in the lapse of four years, five new precipitation tanks were constructed, and now all the tanks put together could hold six and a third million gallons. Far more remarkable than this extension of an old system were the numerous and valuable experiments then made in the bacteriological treatment of sewage. The corporation has published in volume form a full account of these experiments which were conducted by Colonel T. W. Harding and Mr. W. H. Harrison, M.Sc. This appeared in 1905, and together with the Leeds experiments in general has been the subject of much discussion and comment. It would be somewhat out of date to travel over the ground again, but some of the main points ascertained may be briefly recalled.

The Aerobic Treatment of Sewage.

In contact beds effective aeration must be secured. The oxidising surface of small is greater than that of large filtering material. But, on the other hand, the smaller the filtering agent the more thoroughly does it retain all suspended matter, and thus the filter is very soon clogged. The coarser the material the longer will it remain serviceable. Now the great point ascertained at the Leeds experiments is that at least half the suspended matter in sewage cannot be dissolved by bacterial action. Further, if it is allowed to clog up the filter a fungus will grow upon it and complicate matters. A coarse filter will let mineral and inorganic matter pass through and only retain what can be digested—that is, transformed by bacteriological action. Therefore it was found that filtering for clarifying purposes should be the second and not the first operation. The experiments went on to prove that it was necessary to pass the sewage through a fine screen and then on to a coarse filter. In normal dry weather this sufficed to oxidise the sewage, and though it was still thick and contained

much suspended matter it was not putrescent. The sludge from sewage collected after passing through a coarse filter could be dried in the open without causing nuisance. This is a rapid aerobic treatment. In a quarter of an hour sewage could be passed through the screen, the coarse filter, then a finer clarifying filter, though a process of precipitation instead of the second filtration would require much more time.

The need of rapid and economic action may antagonise the claims of science that the purification should be reliable and absolute. Whether the sewage is thrown on land or on artificial filters neither medium must be overworked. There must be periods of rest for ploughing the land or for removing the accumulations and washing the materials of the filter. When fresh air is plentifully supplied the aerobic organisms rapidly and inoffensively destroy animal substances; but if the transformation of vegetable substances is similar it requires a much longer time, and this is especially the case with woody fibre, such as paper pulp. The present sewerage works, however, have not yet bacterial beds in operation.

The Importance of Screening Sewage.

A good deal of time and trouble can be saved by removing from the sewage the larger particles of suspended matter. They choke the filters, and for the most part cannot be transformed or digested by bacterial action. At Leeds, especially as a consequence of the local industries, there are large quantities of fibre and wool in the sewage. Last year the discharge of waste water into the sewers by the different trades amounted to a little over 3,500,000 gallons in the 24 hours. Of this more than 2,000,000 gallons came from piece scouring, wool scouring, and dyeing. Something like 20 per cent. of the average dry weather flow of sewage comes from the trades and industries of the city. To prevent some of the difficulties this would cause there are actually 88 settling tanks on the manufacturers' premises, where the waste water is submitted to a preliminary treatment before it is allowed to flow into the public sewer. Fifty-two of these tanks are under the direct control of the corporation. When, with the courteous assistance of the medical officer of health, Dr. J. Spottiswoode Cameron, I was enabled to visit the sewage works, the first thing examined was the screens used to prevent large particles of suspended matter reaching the tanks and filtering-beds. There are two screens 10 feet wide, made of strong bars with a wire mesh between, only 5/8ths of an inch apart. Revolving rakes, driven by an electric motor, automatically remove what is retained by this screen. It was black-looking stuff, but it is valuable, for the farmers are very eager to get as much as possible. It has also been advantageously used as manure by market gardeners.

Clarifying the Sewage.

The sewage arrives at the works by gravitation, but after passing through the screens is lifted 16 feet into tanks by a couple of pumps. Two dynamo pumps of 52 and 75 b.h.p., each driven by Delaval steam turbines, are also in action to supply power for the screens, the chemical precipitation machinery, and for lighting the works by electricity. Thirty million gallons of sewage can be lifted out of the main collector into the tanks in the course of a day. From the pumps the sewage is divided between two grit-pits. The heavy matter that settles at the bottom of these pits is lifted and removed by a Priestman grab or digger and a travelling steam crane. The sewage is now allowed to flow into a central chamber where it is mixed with milk of lime, for this is more expeditious than lime water. The lime is broken into fine dust, and there are ingenious contrivances to ensure that the quantity of lime shall be regulated according to the quantity of sewage to be treated. After this the sewage, distributed in different tanks, is allowed eight hours for sedimentation. From the tanks the effluent goes by the main channel to a gauge chamber, where it is measured by an automatic recorder, and finally discharged into the River Aire below Thwaite Mill weir.

Utilising the Sludge.

The total amount of sewage treated in the 12 months ending March 31st, 1911, was estimated at 5,929,754,000 gallons. This is a daily average of 16,290,535, or about 38 gallons per day per head, from a population of 427,500. The working expenses amounted to £2820, including the consumption of 3840 tons of coal at 10*s.* a ton. Nearly five million gallons of water were evaporated. The cost of lifting the sewage works out at 4·25*d.* per million gallons per foot lift. The screen stopped 1527 tons of garbage, or 4½ tons of large particles were arrested per day and prevented from clogging the sewage works. This is equal to 5 1/6th cwt. for each 1,000,000 gallons of sewage, and the cost was 1*s.* 1*d.* per million gallons of sewage. The amount of grit extracted from the pits near the entrance by the crane and grab amounted to 1755 tons, or 4 tons 16 cwt. per day, making 6 cwt. of grit per million gallons of sewage. For precipitating purposes, 929 tons of lime were used at 12*s.* 8*d.* the ton, and in the proportion of 10 parts of lime to every 100,000 parts of sewage. The total cost of chemical precipitation was £1098, or 3*s.* 8*d.* per million gallons of sewage.

The sludge from the tanks amounted to 120,365 tons, of which 91·10 per cent. is water, which is afterwards reduced to 86·6 per cent. by further treatment. After this the sludge is passed into presses, and the result for the year was the production of 36,786 tons of sludge cake. For the treatment of the sludge 1 per cent. by weight more lime is added. Altogether the cost of dealing with the sludge was £3035, or 10*s.* 3*d.*, per million gallons of sewage treated. This makes the cost of the sludge cake amount to 1*s.* 8*d.* per ton. It still contains 59·7 per cent. of water. The mineral residue is 23·0; the volatile matter, 16·8; the fixed carbon, 4·2; the total nitrogen, 0·61; and the total phosphate as calcium phosphate, 0·98 per cent. The making of sludge cakes has not proved a profitable enterprise. Only 3623 tons of the sludge cakes were sold and for the modest sum of £160. The greater part of the cakes, 28,459 tons, were conveyed on a narrow gauge railway to some low-lying land recently acquired in this neighbourhood by the corporation. Here it was tipped over to an average depth of six feet and then covered with a layer of soil. It is stated that the low land which is thus being raised to a higher level will be used for public gardens and not for private dwellings.

The Effluent Obtained.

The analyses made compare the crude sewage with the effluent after treatment. The results are in parts per 100,000. The crude sewage, giving the average of the whole year, showed: Suspended solids, 60·7; soluble solids, 108·8; albuminoid ammonia, 0·663; oxygen absorbed in four hours, 12·23. The effluent from the tanks of this sewage after treatment contained: Suspended solids, 7·3; soluble solids, 104·1; albuminoid ammonia, 0·367; oxygen absorbed in four hours, 5·16. Much better results are anticipated when, as embodied in the sewerage works extension scheme, bacteria beds are constructed. The great difficulty has been to obtain the necessary land. In 1900 the corporation, finding nothing closer at hand, bought 1880 acres 13 miles away near Selby. But then four years later the Selby urban district council, in spite of opposition from Leeds, obtained powers from Parliament to bore for water-supply and storage close to the land which the corporation of Leeds wanted to use for new sewerage works. Adjoining the existing Knostrop sewerage works there is land that would do admirably for the extension of the sewerage works, but the owner would not sell his land for such a purpose. Towards the end of 1904, however, his successor withdrew opposition. In 1908 Parliament passed a Bill by which the corporation was able to acquire 600 acres of land adjoining the Knostrop sewerage works from this estate, and there the bacteria beds will be constructed. In the meanwhile the corporation had been again prosecuted, and was ordered by the late Mr. Justice Grantham, in July, 1907, to remodel its works at Knostrop, so that the suspended solids in the effluent from the tanks in dry weather should not contain more than 11 parts per 100,000. It is these reconstituted works that I visited and have described. The analyses given above show that Sir William Grantham's instructions have been faithfully carried out. But it will be still more interesting to see the results when the land newly acquired is fully utilised.

The Workers at the Sewerage Works.

At present there are 70 workmen engaged at Knostrop. On inquiring about their health I was assured that some of them had been employed on the sewerage works for 20 years and had not suffered a day's illness. For the most part they are middle-aged men, and though in the immediate vicinity of sewage, they are constantly in the open air. The chief fear is blood poisoning. Therefore antiseptic dressing is

kept ready to hand, and great care is taken to use it even for slight cuts. Somewhat rough washing convenience and a mess-room are provided, together with a heating oven. Each man has a locker where his food can be kept clean and the dust and the flies cannot get to it. The men bring their food with them and are glad to be able to warm it up. Thus the essentials are provided, though it must be remarked that not a thought has been bestowed on relieving the roughness and dreariness of the mess-room. The scientific treatment of sewage is so essential to the well-being of the community that it is perhaps not too much to ask for a little attention to the comfort of those who labour all day long at the sewerage works.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Third South Midland Field Ambulance.

THE new headquarters of this ambulance were opened on Saturday, Nov. 25th, by Earl Beauchamp. They are situated in Kingsdown, Bristol, and provide excellent accommodation, including a spacious drill-hall, sergeants' mess, lecture-hall, commanding officer's room, officers' room, quartermaster's stores, a demonstration room, wagon sheds, and a harness room. Earl Beauchamp congratulated the corps on this evidence of the interest taken in the Territorial movement in the west country, and said they owed a great debt to Colonel A. W. Prichard and Colonel J. Paul Bush for their work of organisation.

Bristol General Hospital.

The work of building the new wing has begun; at least, the workmen are demolishing a large warehouse to make room for it. This warehouse, the property of the hospital, was purchased some years ago to make extension possible when the occasion arose. Its replacement by the new wing will make the circle of hospital buildings surrounding the main courtyard complete at last, for it has hitherto occupied the gap between the pathological block and the main body of hospital premises.

Bristol Hospital Sunday Fund.

At the annual meeting of the committee administering the collection and distribution of the Lord Mayor's Hospital Fund for Bristol, it was announced that a sum of £1887 13*s.* 9*d.* had been collected in 1911, the bulk of which had been divided among the medical institutions of the city as follows: Royal Infirmary, £739 10*s.*; General Hospital, £620 10*s.*; Children's Hospital, £232 13*s.*; Eye Hospital, £110 10*s.*; other institutions, £107 3*s.* Mr. William Garnett was appointed honorary treasurer in the place of Mr. E. J. Swann, who has retired. The Lord Mayor (Mr. F. W. Wills) said he hoped it would be possible to raise £2000 at least in 1912.

The Royal Hospital for Children, Bristol.

A meeting of the Ladies' Auxiliary in connexion with the Children's Hospital, Bristol, was held last week. The report stated that during the past 12 months 290 ladies had canvassed 253 districts for the funds of the charity and nearly £900 had been collected by them.

Mussels and Enteric Fever.

At a meeting of the St. Thomas (Devon) rural district council held on Dec. 8th a letter was read from the Derby council, stating that a case of enteric fever which had occurred in that town had been attributed to mussels brought from Lympstone, and asking the district council to take steps to prevent the mussel beds from being polluted. After a considerable discussion, during which it was stated that the pollution of the river Exe, where the mussel beds are situated, was principally due to the sewage of Exmouth, it was decided to refer the matter to the Lympstone parochial committee.

Death of Mr. George Arthur Slack.

Mr. G. A. Slack died at his residence, The Lodge, Uffculme, Devon, on Nov. 18th, in his sixty-fifth year. He was the son of the late Mr. T. T. Slack, of Paignton, and received his medical education at Guy's Hospital, London. He qualified as M.R.C.S. Eng. in 1886. Shortly afterwards he commenced practice at Uffculme and married the daughter of the late Rev. T. C. Tanner, vicar of Burlescombe. Mr. Slack was well known and very popular in Uffculme and the district, and much regret is felt there at his death. The funeral took place at Uffculme on Nov. 22nd in the presence of a large gathering, which included several of the local clergy and members of the medical profession.

Dec. 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool School of Tropical Medicine: Banquet Celebration of Foreign Expeditions.

AT the invitation of Sir W. H. Lever, the chairman of the School of Tropical Medicine, a banquet was held at the Adelphi Hotel, Liverpool, on Dec. 6th, to meet Professor Newstead on his return from the sleeping sickness expedition to Nyasaland, and Dr. Harald Seidelin on his departure to Yucatan, Mexico, on a yellow fever investigation expedition. Owing to having contracted a chill, Professor Newstead was, unfortunately, unable to be present, but forwarded a written communication which was read during the evening. Among the guests were Professor Sir Ronald Ross, K.C.B., Sir Edward D. Lawrence, Sir Alfred Haslam, Sir Edward Evans, Dr. Richard Caton (formerly Lord Mayor of Liverpool), Dr. J. W. W. Stephens (Walter Myers lecturer in tropical medicine), Dr. E. W. Hope (medical officer of health), and Mr. A. H. Milne, C.M.G. Sir William Lever proposed the toast of "Professor Newstead's Expedition and that of Dr. Harald Seidelin." He first of all expressed his great regret at the enforced absence of Professor Newstead. He remarked that it had always been the good fortune of the Liverpool School to attract to itself the very best men in the cause of scientific research. He thought Liverpool ought to have facilities for the treatment of sleeping sickness not to be equalled in any other part of the world. The trustees of their late revered chairman (Sir Alfred Jones) had intimated that they would come to their assistance, and in addition to better accommodation in Liverpool it was proposed to establish a laboratory on the West Coast of Africa where investigations into tropical diseases might be made on the spot, and so enable them to curb and check, and possibly to finally exterminate, this dreadful scourge. He took this opportunity of congratulating Sir Ronald Ross (Sir Alfred Jones professor of tropical medicine), and Mr. Milne (the secretary of the school) upon the honours recently conferred upon them by the King. Dr. Harald Seidelin, in responding to the toast, expressed his gratitude to the late Sir Rubert Boyce for having made it possible for him to become connected with the Liverpool School of Tropical Medicine. In Yucatan he himself had been afflicted with yellow fever, and it was his object to establish the principal points in regard to the mosquito parasite. He had demonstrated the parasite in the blood, and he now hoped to find it in the living state. He also hoped to find the parasite in the mosquito, and to find some new means of treatment of yellow fever. He expected to make important entomological investigation, if there were time. As yet he could not promise any great results, but he would do his best. The toast of "Research into Tropical Diseases," proposed by Sir Edward Lawrence, was responded to by Sir Ronald Ross, who said that Liverpool had become one of the greatest centres of medical research, and anyone who contributed to the movement would be making a gift to humanity. The chairman suggested (amid applause) the sending of a telegram to Sir William MacGregor, congratulating him upon the first report of the Queensland School, and also a message to Dr. H. W. Thomas, who was on the Amazon investigating yellow fever, conveying Christmas greetings.

Fatal Case of Anthrax in Liverpool.

The deputy coroner recently held an inquiry into the death of a workman in the Mersey Docks and Harbour Board's Wool Warehouse, which occurred at the David Lewis Northern Hospital on Dec. 2nd. The deceased had been employed at the warehouse for the last 10 years. His duties were to deal with bales of Persian wool, which had been imported into Liverpool by a ship from Bombay. Shortly after 6 P.M. on Nov. 29th he drew his landlady's attention to a pimple on his neck, and said to her, "That's anthrax." He went to

the hospital, where the lesion was dressed, and returned home. He returned to the hospital on the following day and was advised to become an in-patient, where an operation was subsequently performed. In spite of this he died on the following day. A verdict of "Death from anthrax poisoning" was returned by the jury.

Chester Infirmary: Improvement Scheme.

The board of management of the Chester Infirmary has decided to set in motion a scheme for extending and renovating the infirmary, which is estimated to cost about £25,000. The abandonment by the Chester town council of the electricity works as a site for the refuse destructor was reported, and in consequence the board unanimously agreed to proceed with its scheme. The plans of the extension and the reports from the medical committee will be submitted to the board of management at its annual meeting in January, 1912.

Dec. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Policy of the Medical Profession in Scotland.

THE profession in Edinburgh is deeply concerned about the Insurance Bill, to the exclusion of other topics, and this feeling is reflected in the lay press, to which many letters have lately been contributed by medical practitioners. In the *Scotsman* in particular an important discussion is in progress with regard to the attitude to be adopted by the profession in Scotland towards the Bill. The council of the Edinburgh branch of the British Medical Association on Dec. 8th passed resolutions urging all members to remain loyal to the Association during the present crisis, and determining that in the event of the Bill becoming law the Association should continue to insist on its demands being carried into effect through the Local Medical Committees. The meeting was also attended by representatives from most of the other Scottish branches of the Association. In a letter in the *Scotsman* of Dec. 11th Dr. William Russell and Dr. A. Logan Turner contend that the wage limit should from the first have been made "the centre and citadel of the medical position." Now, however, the controversy between the Chancellor and the profession has been transferred to one between the Local Insurance Committees and the medical men. Under these circumstances it lies with the Local Medical Committees to see to it that whatever predatory instincts may be manifested by the Local Insurance Committees should be restrained and opposed. The writers claim that the canvass of the different areas in Scotland has been so complete that it is now only necessary for the men who have pledged themselves to adhere to their pledges to insure that service under the Act will be such as the profession has continuously insisted upon. In conclusion, they declare that it is impossible for the profession in Scotland to wash its hands of the Act and decline to set up Local Medical Committees, because many local Scottish organisations of the Association have already decided to carry on the fight in the local insurance areas to be constituted under the Act. Dr. William Craig, in a letter in the same issue, criticises various points in the policy adopted by the executive of the Association, and maintains that the "quasi-strike resolution" has postponed definite decision, and that consequently the profession is now being led on against its wish "into a position from which it will have difficulty in retreating and in maintaining its ranks." Dr. J. Stuart Ross suggests in the same issue that the way out of the difficulty, so far as Scotland is concerned at any rate, is that proposed by Dr. Gibson. Let a Scottish National Committee be formed of men universally trusted by the profession, and let its first task be to investigate this alleged evidence of "a multiplicity of potential blacklegs." The profession in Scotland would then, Dr. Ross believes, be in a position to decide whether to refuse to enter into any negotiations, and wait for the breakdown of that part of the Act which refers to medical benefit, or to form Local Medical Committees to inquire at any rate what are the best terms to be obtained under the Act, as interpreted by the Insurance Committees and Commissioners. A large number of men wish to adopt the first course, while the second is recommended by the Association.

Aberdeen Doctors and the Family Medical Fund.

A circular has been sent to every medical practitioner in Aberdeen by the local branch of the British Medical Association, which states that at a meeting of the division held at 29, King-street, on Nov. 27th, the secretaries reported that the circular recently issued with reference to the abolition of the Family Medical Fund, and avoidance of competition for Friendly Society Lodges, had been signed by every practitioner in Aberdeen and suburbs. It was unanimously resolved that every practitioner undertaking Friendly Society work for 1912 should do so on the following terms:

> I accept the appointment for the year 1912, unless the National Insurance Bill, now before Parliament, becomes an Act, and becomes operative within the year, in which event this contract shall cease.

Dec. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Commissioners.

THE appointments to the Insurance Commission are better than rumour led one to expect. The chairman, Mr. Glynn, is known to be a liberal and fair-minded man and a good man of affairs. He is a solicitor, and has been for several years chairman of the Galway county council. Mr. Kinnear, the deputy chairman, is energetic and still young; he has been connected with insurance business all his life, and is at present President of the Insurance Institute of Ireland. Dr. W. J. Maguire, the medical Commissioner, is senior physician to the Mater Infirmorum Hospital in Belfast, and was formerly a lecturer on clinical medicine and examiner in medicine in the Queen's University, Belfast, and examiner at the National University of Ireland. The appointment of a woman Commissioner was not expected, but the Government has been well advised in securing the services of Mrs. Dickie. She has been for several years an inspector of boarded-out children for the Local Government Board, Ireland, and it is chiefly due to her exertions that the boarding-out system has proved a success.

The Milk Commission.

The Milk Commission has held several sittings in Dublin, and has examined, among others, Sir Charles Cameron, Professor McWeeney, Professor W. H. Thompson, Dr. O'Donoghue, Mr. Andrew Watson, M.R.C.V.S., and Lady Dunleath. Sir Charles Cameron stated that milk brought into Dublin from the country was more frequently at fault than milk produced in the city, and he urged the necessity of giving medical officers of health the power of tracing milk to its source. Professor McWeeney spoke of the relation of typhoid fever to milk-supply and of the danger of typhoid carriers. He suggested that all persons engaged in the handling of milk should be required to submit to the Widal test. He urged also that tuberculous cows should be slaughtered. Professor Thompson spoke of various substitutes for fresh milk when the latter cannot be got, and he recommended dried milk as the best. Lady Dunleath strongly advocated the use of goat's milk as a substitute for cows' milk, and referred to her experiments in the introduction of two varieties of goats, by crossing which with the old type a greater bulk of superior milk was produced. Dr. O'Donoghue gave disquieting evidence as to the condition of the dairy-yards in the northern part of County Dublin, of a large part of which he is medical officer. Of 70 dairies in his district 20 were not fit for the keeping of cows. In three recent epidemics of typhoid fever the cause was directly traceable to milk infection. Moreover, there was great laxity in the administration of the Dairies and Cowsheds Order, and no attention was given to the clothes or general condition of the persons handling the milk.

A Medical Assessor to a Judge.

In a case brought before him last week for the recovery of medical fees from the executors of a deceased patient, the Master of the Rolls postponed the hearing until he could have the assistance of a medical assessor. Sir Charles Ball ultimately sat with him throughout the case. Judgment was given for the full amount claimed.

Feeding of School Children.

For some time past there has been discussion in Dublin concerning the undue length of the school hours in the primary schools. In most cases children sit, or, worse still, stand, in class from 9 30 in the morning to 3 in the afternoon, with a break of half an hour in the middle of the day for lunch and exercise. The poorer children have no lunch, and have, therefore, to fast from early morning till late afternoon. The system is thoroughly unhygienic, and many suggestions have been made that the school day should either be shortened, or be broken into a morning and an afternoon session. A Ladies' School Dinner Committee has been formed in Dublin, which attempts, by subscriptions from the public, to provide midday dinners for the poorer children. A deputation from this committee waited on the corporation a few days ago to ask for a grant from the city funds. In Ireland, however, municipal authorities have no power to strike a rate for such a purpose.

The Exclusion of Medical Benefit from the National Insurance Bill.

At a meeting of the Belfast Trades Council held on Dec. 7th a resolution was passed condemning the action of the Irish Parliamentary party in excluding medical benefits from Ireland.

Medical Guild Formed in Belfast.

On Dec. 7th, at the Medical Institute, Belfast, when Dr. J. R. Davison presided over a large attendance, it was decided to form a medical guild in Belfast to include all branches of the profession. Its object is to watch carefully all movements likely to affect the interests of medical men in any way, and to take united action in regard to them. It will work in harmony with existing medical societies, but will deal with matters which cannot be treated in a satisfactory manner by the other societies—the Irish Medical Association, Ulster Medical Association, or British Medical Association—as at present organised. A committee was appointed, with Dr. Davison as chairman, Dr. George Elliott as secretary, and Dr. John Simpson as treasurer, to draw up the constitution and the rules of this new medical guild. The guild has forwarded its congratulations to Dr. W. J. Maguire on his appointment as Medical Commissioner in Ireland.

The Belfast Water Commissioners.

At a largely attended meeting of the Belfast Citizens' Association held on Dec. 11th a letter was read from a member of the Water Commissioners to the effect that people used too much water in Belfast, and that they had to blame themselves for its scarcity. This comment occasioned considerable amusement. There is a strong feeling that the time has arrived for amalgamating the board with the city corporation, and the chairman of this annual meeting of the Citizens' Association pointed out that the late Belfast Health Commission in its report strongly recommended that the Water Board should be amalgamated with the city corporation. It was also pointed out that this same arrangement had been advised by a special commission as far back as 1859.

Ballymena Cottage Hospital.

From the thirteenth annual report, presented to a meeting of the supporters of the Cottage Hospital, Ballymena, held on Dec. 5th, it appears that 128 patients—97 interne and 31 externe—were treated during the past year. Financially the income was £549 16*s.* 8*d.* and the expenditure £516 10*s.* 6*d.*, leaving a credit balance of £33 6*s.* 2*d.*, which is larger than in the previous year.

Dec. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Illegal Practice of Medicine.

THE illegal practice of medicine unfortunately continues to find easy dupes in France. It is a singular fact that the public, although often distrustful of the properly qualified medical man and his prescriptions, has implicit confidence in irregular practitioners and readily follows their advice even when it is actually childish. At the last meeting of the Syndicate of the Medical Men of the Seine, this important association, which has about 1500 members, discussed the reasons of the present remissness in the application of measures for the repression of illegal practice. M. Levassor, to whom the syndicate had specially assigned this duty, regretfully acknowledged that these practitioners employed clever lawyers, and were using every endeavour to lead the syndicate into protracted and costly litigation. Legal proceedings of this description were not only deplorably slow, but they also required to be supported by expert testimony, the expense of which was often heavy and was not always repaid to the syndicate. It was nevertheless to be wished that the steps taken for this purpose should have some practical result in the way of putting down these abuses, which not only deprived medical men of a portion of the income which they might reasonably expect to derive from their profession, but even damaged the reputation of the profession itself, through the misunderstandings which irregular practitioners endeavoured to create in the minds of the public.

Opposition of the Students to the New Regulations for Medical Study.

By a decree bearing date January, 1909, some important changes were ordered to be made in the system of medical education, chiefly with respect to the duration of the curriculum, which was increased from four years to five. This prolongation was quite essential on account of the time required to be spent in hospital and laboratory work, a requirement designed to prevent the granting of medical qualifications on the ground of merely theoretical knowledge. Practical work in physiology, medical physics, medical chemistry, and bacteriology will, in fact, be obligatory and will be combined with theoretical instruction so as to provide experimental illustrations of the latter. Hospital attendance will extend over the whole curriculum, commencing with elementary clinical instruction and progressing through the various departments of study, so that under the tuition of the Faculty the future practitioner will have had opportunities of observing the clinical features and the treatment of all the serious conditions which he will encounter when subsequently practising on his own account. Finally, to diminish the effect of chance in the examinations the students will have a memorandum book in which will be entered the marks which they have obtained in practical work, in clinical exercises, and in previous examinations. This new decree has just been issued by the Minister of Public Instruction with the signature of the President of the Republic, but has not been well received. Medical teachers and students have requested that it should be referred back for modification, but their objections have been disregarded, as the decree has been issued after signature and the Chamber of Deputies will soon be requested to vote the funds necessary for carrying out the new scheme. This being the position of affairs, the manifestations of hostility to M. Nicolas had only just been quelled by the temporary cessation of his lectures, when turbulent scenes were again created by the first year's students on Nov. 28th, and the Incorporated Association of Medical Students resolved to carry on an energetic campaign for the purpose of obtaining from the public authorities the withdrawal of the new decree. Large posters to this effect have been displayed throughout the Quartier Latin and the first year's students have held a crowded meeting at the offices of the incorporated association. This meeting adopted a resolution to the effect that the students objected to the decree on the ground that it would be unworkable in practice and prejudicial in its action, for by extending the practical and special courses it would interfere with clinical teaching and deprive the students of opportunities for personal study; it was also incomplete because the prolongation of hospital attendance was not made applicable to all the departments of hospital work, but would, on the contrary, bring more students into wards which were already overcrowded with them. The students therefore requested that the decree should be withdrawn and referred to the Superior Medical Council; it was also decided to make arrangements for approaching the Minister of Public Instruction.

The International Sanitary Conference.

M. de Selves, the Minister of Foreign Affairs, opened the International Sanitary Conference which is being held in Paris under the presidency of M. Barrère, the French Ambassador to Rome. The idea of an understanding between

various Governments for the purpose of organising a combined defence against imported epidemics is of French origin, the first Sanitary Conference having been held at Paris in 1851. The present conference is revising the rules adopted in 1903 in order to bring them into conformity with recent discoveries as to the etiology of epidemic diseases, and enforce (1) better notification of infectious diseases, and (2) the application to shipping (with heavy penalties in case of default) of the sanitary requirements in regard to unwholesome dwellings. The conference is also recommending an improvement in the position of the medical officers of passenger vessels, officers who are ill-selected, ill-paid, and ill-provided with requisites for rendering all the services which might be expected from their knowledge and their devotion to duty.

Piroplasmosis among Horses in France.

The horses of some of the agricultural associations in the neighbourhood of the ponds of Camargue in the Department of the Gard have been suffering from a disease the nature of which has until lately remained a mystery. The principal symptom of this disease, which has a case mortality of from 80 to 90 per cent., is progressive anæmia, accompanied by pyrexia, and the attack generally proves fatal in a few months. A single proprietor has through this disease sustained a loss of about 300,000 francs. The nature of the malady has at last been elucidated by the patient researches of M. Dubois, chief veterinary surgeon of the Gard, and M. Grouzet, veterinary surgeon at Saint Gilles, in the same Department. It is caused by a parasite which multiplies in the blood of the horses. This parasite resembles the hæmatozoa found by Laveran in equine piroplasmosis, a very common condition in South Africa—especially in the Transvaal and Cape Colony—as well as in Algeria and Morocco. As in Africa, so in the Gard, the disease in conveyed by the bites of insects. The epidemic in the Gard is the first scientifically observed instance of equine piroplasmosis in France.

Presentation to Professor Armand Gautier.

On Nov. 25th the colleagues, friends, and pupils of Professor Armand Gautier held a celebration in honour of the fiftieth anniversary of his university career, and presented him with a medal and a bust of himself executed by M. Vernon and M. Theunissen. The Minister of Public Instruction was represented by M. Bayet, director of the department of higher education, who was in the chair. Successive addresses were delivered by M. Haller, president of the medal and bust committee; Professor Landouzy, representing the Faculty of Medicine; M. Lippmann, representing the Academy of Sciences, of which Professor Gautier is the president; M. Hanriot, representing the Academy of Medicine and the council of hygiene; and M. André Lefevre, representing the old pupils. Professor Gautier, who was deeply moved, expressed his hearty thanks to all those who had contributed to the success of the meeting.

Dec. 11th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the Austrian Medical Councils.

THE yearly meeting of the delegates of all the Austrian Medical Councils has just taken place, and its proceedings on this occasion had a direct bearing on the various problems urgently requiring a decision. The proposed new series of regulations, called the Aerzteordnung (equivalent to a Medical Act), is now under consideration amongst the members of the profession, and there has seldom been a law or a legislative proposal which has evoked such a uniform opposition from the classes affected by it as this has done. The meeting of the councils has been arranged chiefly for the purpose of discussing and repudiating this unwelcome Bill, and for considering what steps should be taken for the protection of the profession against such a measure.

As has already been pointed out in this column[1] one of the chief grievances of the profession was the article which would in certain circumstances ignore the rule of professional secrecy. Since that time, however, it has become known that several other clauses have been proposed which appear to be equally inacceptable. Thus, for instance, the meeting has passed a resolution to the effect that a *numerus clausus*, such as has been proposed by the Government, is absolutely against the interests and wishes of the medical profession. This portion of the Act would introduce for towns with more than 50,000 inhabitants and for health resorts a stipulation that the number of medical men permitted to practise there should be regulated by the magistrates.

Another resolution adopted by the meeting was to the effect that practitioners should be entitled to refuse to render medical aid to certain corporations, institutes, or classes of people if such an understanding has been arrived at between a number of practitioners. This is in direct opposition to the view of the Government expressed in Section 35 of the Act as follows: "Arrangements by which a certain class of persons or a district or institute shall be excluded from receiving medical help are inadmissible and cannot bind the parties concerned." The intention of this article is to make a medical boycott of certain clubs impossible. During the last few years there have been serious disputes between the clubs and their medical officers, but the latter have hitherto been able to hold their ground owing to successful boycotting. Naturally, the profession would lose one of its most useful weapons if a boycott were made unlawful for them. For this purpose the Medical Act provides also the possibility of allowing foreign medical men to practise in Austria, and they would be allowed to do so by the Government if, for instance, a part of the Austrian medical men should declare a strike. Of course, the profession protests vehemently against this clause, and the councils have adopted a resolution condemning it. The Government is, in fact, trying to make the Act as useful for itself as possible in order to suppress the liberty of our profession and to make it subservient to Socialistic tendencies, without granting us any compensation. The meeting has sent its protest and its resolutions to the Government formulated in unmistakeable terms.

Amongst other subjects discussed was the problem of private practice by military medical officers on active service, who do not come under the scope of the regulations, and are in many respects much better off than the private practitioners. The meeting resolved to ask the military authorities that military medical officers engaged in private practice should be subject to the same regulations and laws as the civilian practitioners in the same district. Another question brought before the meeting was an old desideratum of the profession—namely, a law dealing with sanitary matters all round. This would require the creation of a special ministry for health affairs, the head of which should be a doctor of medicine. The question of dentists has also been under discussion during the last year or two. The Government intends the creation of a special class of dentists, who should be intermediate between the mere mechanical dentist of to-day and the doctor of medicine, without being surgeon-dentists. The profession has repeatedly protested against the introduction of this hybrid class of dentists, for if they were allowed it would not be possible to exclude such half-qualified men from other branches of medicine, and the effect would be that ophthalmology and pædiatrics would be invaded by opticians and truss-makers. The meeting repeated the old protest.

One of the final subjects under discussion was the formation of a medical bank which should work hand in hand with the medical insurance company already existing, and grant mortgages and loans on easy terms to medical men and corporations. An active discussion was devoted to the old but burning question of national insurance against sickness. Here, as in England, the profession insists on a certain maximum wage limit for those who will be eligible for compulsory insurance under this scheme; with us an annual income of 2400 kronen, or £100 a year, is the limit conceded by the profession, whilst the Government want the amount to be 50 per cent. more. The profession also wants the club members to have free choice of a practitioner, which, however, the clubs are stoutly refusing. These points are regarded as so important that preparations are being made to declare a strike if the above-mentioned proposals should become law in their present form.

[1] THE LANCET, Sept. 19th, 1910.

The meeting has therefore had very important questions to consider in order to protect the interests of the profession, and on the present occasion the proceedings of the meeting have received more attention from the general body of practitioners than ever before.

Dec. 9th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Medical Legislation.

IT is anticipated that a measure will be introduced in the course of the ensuing session of Parliament to consolidate the laws of the different provinces in the Union relating to the registration of medical men, dentists, chemists, trained nurses, and midwives, and to the practice of medicine, the sale of poisons, and the like. Some curiosity and no little anxiety are being felt as to the provisions of the anticipated measure. Shortly after the consummation of Union, delegates from the four medical councils met in Johannesburg for the purpose of considering what should be done, and to advise the Government thereon. It is understood that the delegates to that conference, after considerable debate, at length mutually agreed to a series of resolutions. For some extraordinary reason, however, the delegates pledged themselves not to divulge for the time being their proposals to the profession, and to this date the secret has been more or less completely kept. This much has, however, leaked out, that the scheme outlined by the delegates was for a central medical council with four provincial committees, the latter to be enabled to effect registration and to deal with disciplinary cases, accused persons having, however, the right of appeal to the central council. In other words, the committees were to be more or less autonomous, and in all but name provincial medical councils. It appears to have been left to the Orange Free State delegates to draft a Bill for the consideration of the Government embodying the resolutions. They consequently wrote to the Minister of the Interior and asked for the assistance of a draftsman. In reply the Minister asked for the minutes of the conference, and stated that on perusal of these he would have a Bill drafted for submission to the medical councils embodying such of the resolutions as the Government might feel they were able to accept. The minutes were forthwith forwarded to the Minister, and nothing further has been heard of the matter beyond the fact that questions as to the position have been raised at the meetings of the various medical councils. The handing over of the minutes to the Government was a most unwarranted proceeding, for the conference was not in any sense a Government Commission, and the proceedings had no business even to have been withheld from the profession. From a well-informed source it is gathered that the Minister of the Interior does not approve of the proposals of the conference, and it would not seem improbable, therefore, that when the new Medical Bill is published it will be somewhat of the nature of a bombshell. At a recent meeting of the Orange Free State Medical and Pharmacy Council correspondence was read regarding the question of publication of the minutes of the conference, but the president maintained that the sanction of the Government should be obtained before the publication of any statement regarding the matter. On the motion of Dr. Manning, however, seconded by Mr. Hewit, it was resolved that it should be suggested to the Transvaal Medical Council that the Minister of the Interior be asked to publish the minutes of the conference or the Draft Bill, as prepared by the Transvaal Medical Council, and to circularise the same amongst the members of the professions concerned.

Cape Province Medical Council.

Under the Cape Medical Acts the medical officer of health for the colony is *ex officio* a member of the Cape Medical Council. With the retirement on pension of Dr. A. J. Gregory that office has been abolished, and consequently there should really be no such *ex officio* member on the council. It is characteristic of the procedure now in operation that notwithstanding its obvious illegality the Government has informed the council that the assistant medical officer of health for the Union, stationed in the Cape Province, has been *nominated* by the position in lieu of the medical officer of health for the Colony. Several members of the council have objected, but it is understood that the President ruled that the appointment was to be regarded as a lawful one pending the receipt of advice from the Minister of Justice, which the Department of the Interior has been requested to obtain.

Friction in the Johannesburg Hospital.

Feeling is again running high in connexion with the Johannesburg Hospital, and the dissensions between the medical staff on the one hand and the board of management on the other are rapidly reaching a stage when it will become necessary for the former to consider whether they can with dignity continue to hold office. If they resigned they could at least rely on the support of the local profession, and unless conditions improve this course will probably become necessary to secure reform. A strong feeling of discontent with the existing system of administration has been simmering for several years. The medical staff is not only inadequately represented on the board, but it is ignored whenever any vital question of hospital policy has to be decided. If the medical staff were given adequate representation on the board it is probable that much of the ill-feeling and cause for dissatisfaction would disappear. For many years in other hospitals in South Africa the same defect existed, but these mostly are now administered by boards on which the profession is represented, a reform which in nearly every instance was achieved only after a prolonged struggle. A proposal is being made to replace the native wardmaids, porters, and orderlies at the Johannesburg Hospital with Europeans, at an additional cost of £1500 per annum. One influential member is responsible for the proposal, but it was accepted readily by the board, and it was decided to request the Government to provide the money for carrying it into effect. It is not likely that the request will be acceded to.

The Pneumonia Investigation.

Sir Almroth E. Wright landed in Cape Town on Sept. 26th on a six months' engagement with the Chamber of Mines. He was welcomed by Dr. C. F. K. Murray and Dr. D. J. Wood, representing the Cape Province Medical Council, Dr. A. J. Gregory on behalf of the Chamber of Mines, and Dr. M. Hewat and Dr. F. B. Morris, the President and secretary respectively of the Cape of Good Hope (Western) Branch of the British Medical Association. Sir Almroth Wright had intended to visit the Kimberley mines before proceeding to the Rand, but he received an intimation in Cape Town that there was a severe outbreak of pneumonia in one of the mine compounds, and he consequently was unable to carry out his intention. It is to be hoped sincerely that his mission may be successful, for pneumonia is responsible for hundreds of deaths annually at the mines, and all measures taken so far have met with but little success. Sir Almroth Wright was accompanied by Dr. R. W. Dodgson and Dr. W. Parry Morgan. The former gentleman has already had considerable experience of South African problems, for he was at one time in the bacteriological branch of the Cape Public Health Department, and also has had service under the Rhodesian Administration.

The Rietfontein Lazaretto.

The Government hospital, known as the Rietfontein Lazaretto, has recently attracted a good deal of attention in the Transvaal press. This is the chronic sick hospital for the Transvaal, but it also serves as an infectious diseases hospital and a syphilitic depôt. Not only are the buildings quite unsuitable for the purposes for which they are used, but the administration of the institution has during the last few years left much to be desired, and some of the conditions which have been brought to light can only be described as deplorable. The people on the Rand have at last become fairly roused over the matter, and some remarkably strong resolutions were passed at large public meetings held in Johannesburg on Oct. 16th and presided over by the mayor of that town. The hospital is little more than a collection of wood and iron shanties located anyhow on the veldt. The various branches of the institution are not properly separated, and no attempt is made to classify patients in a proper manner. The press has, as usual, exaggerated the condition of affairs, but much of what has been alleged has, at least, a substratum of truth. It is understood that as a result of the agitation the institution is to be rebuilt. It is to be hoped that the system of administration meanwhile will be overhauled.

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(FROM OUR OWN CORRESPONDENT.)

Medical Legislation.

IT is anticipated that a measure will be introduced in the course of the ensuing session of Parliament to consolidate the laws of the different provinces in the Union relating to the registration of medical men, dentists, chemists, trained nurses, and midwives, and to the practice of medicine, the sale of poisons, and the like. Some curiosity and no little anxiety are being felt as to the provisions of the anticipated measure. Shortly after the consummation of Union, delegates from the four medical councils met in Johannesburg for the purpose of considering what should be done, and to advise the Government thereon. It is understood that the delegates to that conference, after considerable debate, at length mutually agreed to a series of resolutions. For some extraordinary reason, however, the delegates pledged themselves not to divulge for the time being their proposals to the profession, and to this date the secret has been more or less completely kept. This much has, however, leaked out, that the scheme outlined by the delegates was for a central medical council with four provincial committees, the latter to be enabled to effect registration and to deal with disciplinary cases, accused persons having, however, the right of appeal to the central council. In other words, the committees were to be more or less autonomous, and in all but name provincial medical councils. It appears to have been left to the Orange Free State delegates to draft a Bill for the consideration of the Government embodying the resolutions. They consequently wrote to the Minister of the Interior and asked for the assistance of a draftsman. In reply the Minister asked for the minutes of the conference, and stated that on perusal of these he would have a Bill drafted for submission to the medical councils embodying such of the resolutions as the Government might feel they were able to accept. The minutes were forthwith forwarded to the Minister, and nothing further has been heard of the matter beyond the fact that questions as to the position have been raised at the meetings of the various medical councils. The handing over of the minutes to the Government was a most unwarranted proceeding, for the conference was not in any sense a Government Commission, and the proceedings had no business even to have been withheld from the profession. From a well-informed source it is gathered that the Minister of the Interior does not approve of the proposals of the conference, and it would not seem improbable, therefore, that when the new Medical Bill is published it will be somewhat of the nature of a bombshell. At a recent meeting of the Orange Free State Medical and Pharmacy Council correspondence was read regarding the question of publication of the minutes of the conference, but the president maintained that the sanction of the Government should be obtained before the publication of any statement regarding the matter. On the motion of Dr. Manning, however, seconded by Mr. Hewit, it was resolved that it should be suggested to the Transvaal Medical Council that the Minister of the Interior be asked to publish the minutes of the conference or the Draft Bill, as prepared by the Transvaal Medical Council, and to circularise the same amongst the members of the professions concerned.

Cape Province Medical Council.

Under the Cape Medical Acts the medical officer of health for the colony is *ex officio* a member of the Cape Medical Council. With the retirement on pension of Dr. A. J. Gregory that office has been abolished, and consequently there should really be no such *ex-officio* member on the council. It is characteristic of the procedure now in operation that notwithstanding its obvious illegality the Government has informed the council that the assistant medical officer of health for the Union, stationed in the Cape Province, has been *nominated* to the position in lieu of the medical officer of health for the Colony. Several members of the council have objected, but it is understood that the President ruled that the appointment was to be regarded as a lawful one pending the receipt of advice from the Minister of Justice, which the Department of the Interior has been requested to obtain.

Friction in the Johannesburg Hospital.

Feeling is again running high in connexion with the Johannesburg Hospital, and the dissensions between the medical staff on the one hand and the board of management on the other are rapidly reaching a stage when it will become necessary for the former to consider whether they can with dignity continue to hold office. If they resigned they could at least rely on the support of the local profession, and unless conditions improve this course will probably become necessary to secure reform. A strong feeling of discontent with the existing system of administration has been simmering for several years. The medical staff is not only inadequately represented on the board, but it is ignored whenever any vital question of hospital policy has to be decided. If the medical staff were given adequate representation on the board it is probable that much of the ill-feeling and cause for dissatisfaction would disappear. For many years in other hospitals in South Africa the same defect existed, but these mostly are now administered by boards on which the profession is represented, a reform which in nearly every instance was achieved only after a prolonged struggle. A proposal is being made to replace the native wardmaids, porters, and orderlies at the Johannesburg Hospital with Europeans, at an additional cost of £1500 per annum. One influential member is responsible for the proposal, but it was accepted readily by the board, and it was decided to request the Government to provide the money for carrying it into effect. It is not likely that the request will be acceded to.

The Pneumonia Investigation.

Sir Almroth E. Wright landed in Cape Town on Sept. 26th on a six months' engagement with the Chamber of Mines. He was welcomed by Dr. C. F. K. Murray and Dr. D. J. Wood, representing the Cape Province Medical Council, Dr. A. J. Gregory on behalf of the Chamber of Mines, and Dr. M. Hewat and Dr. F. B. Morris, the President and secretary respectively of the Cape of Good Hope (Western) Branch of the British Medical Association. Sir Almroth Wright had intended to visit the Kimberley mines before proceeding to the Rand, but he received an intimation in Cape Town that there was a severe outbreak of pneumonia in one of the mine compounds, and he consequently was unable to carry out his intention. It is to be hoped sincerely that his mission may be successful, for pneumonia is responsible for hundreds of deaths annually at the mines, and all measures taken so far have met with but little success. Sir Almroth Wright was accompanied by Dr. R. W. Dodgson and Dr. W. Parry Morgan. The former gentleman has already had considerable experience of South African problems, for he was at one time in the bacteriological branch of the Cape Public Health Department, and also has had service under the Rhodesian Administration.

The Rietfontein Lazaretto.

The Government hospital, known as the Rietfontein Lazaretto, has recently attracted a good deal of attention in the Transvaal press. This is the chronic sick hospital for the Transvaal, but it also serves as an infectious diseases hospital and a syphilitic depôt. Not only are the buildings quite unsuitable for the purposes for which they are used, but the administration of the institution has during the last few years left much to be desired, and some of the conditions which have been brought to light can only be described as deplorable. The people on the Rand have at last become fairly roused over the matter, and some remarkably strong resolutions were passed at large public meetings held in Johannesburg on Oct. 16th and presided over by the mayor of that town. The hospital is little more than a collection of wood and iron shanties located anyhow on the veldt. The various branches of the institution are not properly separated, and no attempt is made to classify patients in a proper manner. The press has, as usual, exaggerated the condition of affairs, but much of what has been alleged has, at least, a substratum of truth. It is understood that as a result of the agitation the institution is to be rebuilt. It is to be hoped that the system of administration meanwhile will be overhauled.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

The Revolution and Red Cross Work in China.

IN my former notes I drew a sad picture of the troublous times the Chinese Empire was passing through from flood and famine. The present state of the country from the added political upheaval is little short of chaos. No one, Chinese or foreign, no matter what his official position may be, can predict what the morrow may bring forth, and in the absence of any efficient central control the different revolutionary centres in the provinces are keeping the country in an extremely unsettled state. Some sensational news has been sent to Europe which has caused anxiety among those having relatives here. Without wishing to make any invidious distinctions I might perhaps hint that those of your readers who wish to get the most sane and sober view of affairs out here would do well to follow the telegrams and articles sent to the *Times* by its well-known correspondent Dr. G. E. Morrison, who no doubt owes something to his medical training for the calm and deliberate methods of reasoning and deduction that he brings into his journalistic calling. When the outbreak took place at Wuchang it was soon seen that neither the Imperialist army nor the revolutionist force was in possession of any adequate medical corps. Shanghai was not long in organising a party under the auspices of the Red Cross Society mainly on the initiative of Mr. Shen Tun-ho, a Chinese gentleman. This party, led by Dr. S. M. Cox, of Shanghai, assisted by Dr. Bennet and Dr. Olesen, two Chinese doctors, and 25 medical students, left for the front and has since been doing good work on the field. At Hankow Dr. J. MacWillie, of the American Protestant Mission, lost no time in getting together a Red Cross Corps which has rendered great assistance. At Peking the Central Government invited the diplomatic body to call for the services of foreign doctors to work in a "Benevolent Society" it was forming. Some hitch has, however, occurred, as the foreign Ministers wished for an understanding that any medical work undertaken would be in accordance with the recognised rules of the Geneva Convention. So far this undertaking has not been officially given, and as racial feeling is at present very bitter between Manchus (the Imperial clansmen) and Chinese, especially in North China, it has not yet been considered advisable to allow foreign doctors and their ambulance staffs to enter the field unless the Convention is accepted in its entirety, though there is no lack of volunteers among the Legation and missionary medical men. None of the missionary hospitals in the fighting area have been in any way touched by either side, and most of them are busy receiving sick and wounded soldiers.

Abuse of the Red Cross Flag.

At the Geneva Convention Great Britain and America did not agree with the other powers that the Red Cross symbol should be restricted solely to work carried out under the society's regulations. In Germany, for instance, it is a punishable offence for any firm to use the Red Cross as a trade mark. Examples of the regrettable misunderstanding as to the proper work of the society are occurring in Peking, where there is more than a tendency to use the Red Cross flag as a means to protect property and possessions which, if extended, will cause the flag to lose its power of protection. A benevolent society, with American missionaries at its head, has been started and has already sold several hundred Red Cross badges to the general public (Chinese) at a dollar each as a sort of insurance for the safety of their lives. The money thus raised has been honestly applied to the renting of quarters to which all wearers of badges could come for refuge, but no adequate protection would be available in the event of an outbreak, as the various guards would be confined to the defence of their respective legations. Though China is a signatory to the Convention the authorities do not intervene to ensure the legal and legitimate use of the symbol. There is much need of some authoritative representation of the society in China at the present moment to see that the Red Cross flag is only employed within the strict limits of the Geneva Treaty.

Plague in Siberia.

It is reported from Manchuria that bubonic plague has broken out at Sharasun, in Russian territory, about 35 miles from the Russo-Chinese frontier. There have been up to the present four deaths, and the Russian doctors have confirmed the nature of the epidemic. An understanding has been arrived at between the Russian and Chinese doctors regarding quarantine measures. The Russian doctors will have charge of the railway area and the Chinese doctors of the roads leading to it. The provisional quarantine station will soon be ready. It is not believed the condition is serious. The Prefect of Manchuria District and the Commissioners of Customs are acting in coöperation with the doctors.

Peking, Nov. 20th.

Obituary.

HENRY ROBERT HEATHER BIGG, F.R.C.S. EDIN., L.R.C.P. EDIN., A.I.C.E.

WE regret to announce that Mr. Henry Robert Heather Bigg died on Dec. 7th at his residence, Wimpole-street, London, at the age of 58, after a long and painful illness borne with great fortitude. Heather Bigg was educated at Rugby, Dr. Temple being then headmaster. When this distinguished man left Rugby, Bigg prepared the illumination for the address presented to him on that occasion. Heather Bigg loved outdoor sports and was captain of the football team, and kept his cap to the day of his death as one of the most cherished mementoes of his school days. He desired to be an artist, but at his father's wish he entered the medical profession and trained at University College Hospital; here he distinguished himself in comparative anatomy and zoology, as well as in practical physiology. He qualified in 1884 at Edinburgh. On the unexpected death of his father, Heather Bigg became engrossed in the practice of orthopraxy. Following in the footsteps of his father he devoted himself to the mechanical treatment of deformities, particularly interesting himself in the improvement of existing substitutes for lost limbs granted to soldiers. Though his professional life was devoted to this class of work, Heather Bigg's mental horizon was by no means limited by artificial limbs and spinal supports. He took a broad interest concerning education, and wrote an admirable tract on "A New View of National Education," and one on "The Human Republic." His love for the classical writers of antiquity did not end with his school days; to the last he delighted in the Latin authors, and Horace had for him an especial charm. In 1900 Heather Bigg published a story in blank verse, "Nell: A Tale of the Thames," containing delightful descriptions of rural scenes in the country near Oxford.

Heather Bigg had a wide circle of talented friends, with whom he loved to discuss questions relating to art and literature. He was very kind to his patients, took keen interest in their welfare, and was beloved in return. He was a zealous Freemason, and held high office in the craft. He was formerly surgeon to the Royal London Irish Volunteers, and the regimental flag was sent to serve as a pall at the funeral service. His body was cremated at Golder's Green. His friends of the Savage Club sent a beautiful wreath for the coffin on that occasion.

WALTER WYMAN, M.D.,

SURGEON-GENERAL OF THE UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

Dr. Walter Wyman, supervising surgeon-general of the United States Public Health and Marine Hospital Service, died on Nov. 20th, as stated last week, in Washington, D.C. Dr. Wyman was born in St. Louis in 1848, and graduated in medicine at the St. Louis Medical College in 1873. In 1876 he entered the United States Marine Hospital Service, and after serving in St. Louis, Cincinnati, Baltimore, New York, and Washington, he was appointed in 1891 surgeon-general of the service. In the following year the service was expanded in scope, becoming the United States Public Health and Marine Hospital Service. Under Surgeon-General Wyman's administration many far-reaching and important improvements regarding the health of the United States—civil, naval, and military—were effected. He was instrumental in the establishment of sanatoriums for consumptive seamen. He was especially interested in problems concerning the health of those engaged in the merchant marine service. Dr. Wyman made a special study of the physical conditions under

which seamen were employed, and the result of his investigations is embodied in recommendations for legislation which have been passed by Congress. At his suggestion the first hospital for tuberculosis under Government auspices was established in New Mexico, and he also sought to have a hospital for lepers established in New Mexico, but the plan was abandoned in deference to local sentiment. He was instrumental in securing the enactment of laws relating to quarantine, and rendered the most valuable service in the prevention of cholera and yellow fever, in the Government regulation of the manufacture and sale of vaccine virus, antitoxin, and other therapeutic sera, and in the founding of the Hygienic Laboratory at Washington. He was chairman of the Committee on International Quarantine of the Pan-American Medical Congress in 1896 and of the Section of Public Health of the International Congress of Arts and Sciences at St. Louis in 1904; he was also president of the Section of State and Municipal Control of the International Congress of Tuberculosis in 1908. Dr. Wyman was a member of many societies, both national and foreign, and was an acknowledged authority on matters concerning public health, while the nature of his official services brought him into contact with the medical profession of all countries.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. J. H. Hollister, formerly professor of clinical medicine in the Northwestern University Medical School, Chicago.—Dr. J. F. W. Ross, professor of gynæcology in the University of Toronto.—Dr. H. A. Robbins, professor of dermatology in Howard University, Washington.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. E. Heyl has been appointed Medical Adviser to the Prussian Home Ministry, in succession to the late Dr. Aschenborn.—*Boston (Harvard University):* Dr. Howard T. Karsner, of Philadelphia, has been appointed Adjunct Professor of Experimental Pathology.—*Buenos Aires:* Dr. Pedro J. Pando has been appointed to the chair of Medical and Biological Chemistry.—*Heidelberg:* Dr. Menge, professor of midwifery, who was offered the chair at Bonn in succession to Dr. Fritsch, has declined to leave his present post.—*Iurieff (Dorpat):* Dr. Westernrik, of the Military Medical Academy, St. Petersburg, has been appointed to the chair of Pathology and Therapeutics.—*Kiel:* Dr. Heinrich Zoeppritz has been recognised as *privat-docent* of Surgery, and Dr. Heinrich Schlact as *privat-docent* of Medicine.—*Königsberg:* Dr. Hahn, of Munich, has been appointed to the chair of Hygiene.—*Lyons:* Dr. P. Courmont has been appointed to the chair of Experimental and Comparative Medicine, in succession to the late Dr. Arloing.—*Marburg:* Dr. Heyde has been recognised as *privat-docent* of Surgery.—*Moscow:* Dr. V. Muratoff, of Tomsk, has been appointed Extraordinary Professor of Neurology and Psychology.—*Naples:* Dr. Annibale De Giacomo has been appointed Extraordinary Professor of Traumatic Affections.—*Palermo:* Dr. Ugo Soli has been recognised as *privat-docent* of Pathological Anatomy.—*Philadelphia (University of Pennsylvania):* Dr. G. W. Norris has been appointed Adjunct Professor of Medicine.—*Pisa:* Dr. G. Volterrani has been recognised as *privat-docent* of External Pathology.—*Sienna:* Dr. G. Razzaboni has been recognised as *privat-docent* of External Pathology.—*Washington (Georgetown University Medical School):* Dr. Ralph A. Hamilton has been promoted to the chair of Histology.

INSTRUCTION IN HOSPITAL ADMINISTRATION FOR THE DIPLOMA OF PUBLIC HEALTH.—A three months' course of lectures and demonstrations in hospital administration will be given at the North-Western Hospital, Hampstead, N.W., and at the Grove Hospital, Tooting, S.W., during January, February, and March, 1912. In the case of each hospital the lectures and demonstrations will be identical, and students can attend on the day that best suits them. The fee for the course is £3 3*s*. At the North-Western Hospital the lecturer will be Dr. J. MacCombie, who will attend on Mondays at 3 P.M. and Thursdays at 11 A.M., beginning on Jan. 8th; and at the Grove Hospital Dr. J. E. Beggs will attend on Wednesdays at 3 P.M. and Saturdays at 11 A.M., beginning on Jan. 10th.

Dr. Legendre, who was reported as killed while on duty with a French scientific mission, is now stated to have been wounded only and to have arrived safely at Yunnanfu.

WEST OF ENGLAND CENTENARIANS.—Mrs. B. Gay, of Kingsdown, Bristol, celebrated the hundredth anniversary of her birthday on Dec. 1st.—Mrs. Sarah Bishop, who was born in March, 1810, died at Wareham, Dorset, on Dec. 5th.

THE After Care Association for Poor Persons Discharged Recovered from Asylums for the Insane appeals for funds to carry on and extend the work, the objects of which are to assist in various ways recovered cases on their discharge from asylums. Contributions should be sent to the secretary, Mr. H. Thornhill Roxby, Church House, Dean's Yard, Westminster, S.W.

DONATIONS AND BEQUESTS.—The late Mr. James Cook, of Weston-super-Mare, has bequeathed £1000 to the Dunster (Somerset) Cottage Hospital, and the residue of his property (after payment of specific legacies), which is estimated at about £36,000, will be divided equally between the Bridgwater Hospital, the Royal West of England Sanatorium, Weston-super-Mare, and the Taunton and Somerset Hospital.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—A Ladies' Association, of which Viscountess Portman is president, has recently been started to assist the hospital by obtaining subscriptions, gifts of ward linen, and so forth. The committee has made a strong appeal to ladies to join this new association, and contributions may be sent to the secretary at the hospital, Marylebone-road, N.W. Like all our charitable institutions, Queen Charlotte's Hospital is feeling the stress of the present disturbed financial conditions of the country; and although we cannot find space for the many Christmas appeals that reach us, we willingly call attention to this new auxiliary for the helping of a deserving charity.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—On Dec. 1st, at Walter House, Bishop's Lydeard, the residence of Lieutenant-Colonel Dennis F. Boles, M.P., a 10 h.p. Darracq motor-car was presented to Mr. Emilien Edward Frossard, L.R.C.P. Lond., M.R.C.S. Eng. Mr. Frossard had a severe illness last spring, and several of his friends and patients thought that a car would be of great assistance to him in his professional work, and consequently subscribed for one for him.—At the Redland Park Mission, Bristol, Mr. William Ledingham Christie, M.D. New Zealand, F.R.C.S. Eng., was recently presented with a dressing-case by several friends and patients on the occasion of his leaving Clifton for Borneo.—At the annual distribution of certificates to members of the Bristol Great Western Railway Ambulance Class, Mr. John Thompson Wallace, M.B., B.Ch., B.A.O. Irel., was presented with a barometer, subscribed for by members of the class, in appreciation of his services as honorary lecturer.—The members of the Teignmouth (Devon) Section of the St. John Ambulance Brigade recently presented Mr. George Herbert Johnson, L.R.C.P.Edin., M.R.C.S. Eng., with a framed photograph of the members as a slight mark of appreciation of his services as honorary instructor.

THE SURGICAL AID SOCIETY.—The Lord Mayor of London presided at the annual meeting of this society, which was held at the Mansion House on Dec. 11th, when an eminently satisfactory report was presented and adopted on the proposal of Canon Simpson, seconded by Mr. Sheriff Briggs. The report showed that the total income amounted to £27,979 12*s*. 10*d*., as against £28,380 16*s*. 9*d*. in the preceding year. This apparent decrease was accounted for by the fact that legacies showed a decline of £2133. The real increase in the year's receipts, independently of legacies, was £1732 9*s*. 2*d*. Archdeacon Sinclair proposed, and Mr. Banks seconded, a vote of thanks to the governors of the society which was enthusiastically carried, as was also the re-election of Mr. Samuel Watson as treasurer. Mr. Watson, in his reply, pointed out that in 1869 when he first took

office the income of the society was £1050, while last year it reached £28,000, the number of patients relieved had increased from 692 to 26,000, and the number of appliances supplied to patients from 587 to 24,000. On the motion of Mr. Alderman and Sheriff Hanson, seconded by Mr. W. Wheatley, the committee was re-elected for the ensuing year, and the thanks of the governors to the honorary surgeons and other office bearers of the society were accorded to them on the proposition of the Rev. D. T. Young, seconded by Dr. H. G. Thompson. Mr. E. Muirhead Little having replied, the proceedings terminated with a vote of thanks to the Lord Mayor, who testified to the good work done by the society, and the great pleasure which it gave him and his sheriffs to lend a helping hand to so deserving a cause. During the course of the proceedings the secretary announced that nearly £450 had been collected in consequence of the meeting.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill and the Medical Profession.

In the course of his speech on the debate on the third reading of the National Insurance Bill on Wednesday, Dec. 6th, the Chancellor of the Exchequer made a brief reference to the attitude of the medical profession. "On the question of the doctors," said Mr. LLOYD GEORGE, "I am treading on very delicate ground, strewn with suspicion. I am not going to say that the doctors are satisfied. After all, if they were to express satisfaction it would weaken what an honourable Member calls their trade union position. They have got to arrange with the Local Health Committee, and if they started by saying that they were satisfied of course it would be the greatest possible mistake that they could make. Still, what has been arranged at any rate in the Bill enables the process of free bargaining to go on between the Local Health Committees, the Friendly Societies, and the medical men. I defy anybody who undertakes this business to come to any other arrangements in an Act of Parliament. And why? Because the conditions vary in every locality. The system that suits Durham and South Wales is repugnant to Lancashire. There was danger of revolt among the doctors in the mining districts. We have given free choice of doctors. The system which suits part of Lancashire will not suit another part of that county. There is only one thing a Minister can do in any Bill dealing with the problem of national health, and that is to allow the Local Health Committee to arrange terms suitable to particular districts and suitable to particular individuals. If you were to keep it open, not for 12 months but for 12 years, you could not come to a better arrangement than that. Therefore, there is no real reason for postponement in that respect."

The National Insurance Bill in the House of Lords.

No obstacle it seems likely will impede the progress of the National Insurance Bill in the House of Lords. The attitude of the official opposition is to refrain from undertaking the amendment of the Bill and to leave to the Government full responsibility for its provisions. On the debate on the motion for the second reading of the Bill on Monday, Dec. 11th, the Marquis of LANSDOWNE reviewed the issues involved in the revision or rejection of the Bill by the House of Lords. He accepted the principle of National Insurance, but vigorously criticised many of the proposals of the Government's scheme. "We have," he said in conclusion, "to chose between the Bill, on the one hand, and, on the other, two or three years of bitter and disturbing controversy between the two Houses of Parliament which in the end would be absolutely fruitless. We have come to the conclusion that the acceptance of the Bill is the wiser course for this House to take. There is only one thing which we will not advise your lordships to do—a thing to which I should certainly decline to be a party. I mean a sham attempt to revise this Bill in the few remaining days of this session—an attempt which would be handicapped by the want of time at our disposal and by the knowledge that we are unable to touch or amend the greater part of the Bill. Such an attempt would be made with a certainty that we could not insist upon most of our amendments, and worse than that, we should be saddled with a share in the responsibility for the injustice and mischief which are written large upon many of the provisions of the Bill." After the leader of the Opposition had spoken those words it was evident that there would be no division on the second reading. Accordingly the Bill was read a second time without any vote being taken.

Viscount HALDANE, in moving the second reading of the Bill, made a long statement on its principles and purposes. With regard to the position of the medical profession, he had little to say. He made the brief statement that medical men would be dealt with by the Local Insurance Committees. He said that they would not be worse off than those who were now associated with the Friendly Societies, and on an average they would probably be 2*s.* better off than they now were in respect of each member of the societies.

In Lord LANSDOWNE'S speech reference was made both to voluntary hospitals and the medical profession under the Bill. He spoke of the alarm with which the former viewed the future, as their finances, now dependent to a large extent on the contributions of workmen and their employers, would suffer by the practical transference of this money to the Insurance Fund. As to the position of medical men under the Bill, he said that he scarcely ever opened his newspaper without seeing a fresh protest from them. He had always felt great sympathy for them. Medical men with working-class practices were about the hardest worked and least well remunerated amongst professional men. Some of the doctors certainly were still unsatisfied. Lord LANSDOWNE went on to say that the position of medical men under the Bill was not a very enviable one. They were at the mercy on the one hand of the Health Committees in which the insured persons would be a majority, and on the other hand at the mercy of the Insurance Commissioners who might strike medical men off the panel. He could not help thinking that if the Government desired the Bill to work successfully they would have taken pains to satisfy medical men on the points which they had raised. He wondered whether Lord Haldane had any knowledge of the movement for the establishment of a National Medical Union which he understood was to resist the effect of the Bill on the profession. A movement of this kind was not a negligible one, and he could not help thinking that the Government might have done more than they had to satisfy the apprehensions that had been felt.

Lord SANDHURST, in a speech which suffered a good deal from the acoustics of the House of Lords, also dealt with the position of the medical profession and hospitals. He expressed a doubt whether a flat rate of 6*s.* would constitute a proper remuneration for the services which the medical man would be called upon to give if he accepted the Act. He also thought that the demands on hospitals would increase, and that at a time when it was becoming more difficult to collect funds by voluntary donations. It seemed only too plain to him that now or in the near future the voluntary hospitals must take their place in the scheme. Lord SANDHURST pointed out that bound up with hospitals were the medical schools, and if they were shut down to any extent medical education would suffer greatly.

The Rag Flock Bill.

The Rag Flock Bill was read a third time in the House of Lords on Wednesday, Dec. 13th.

The University of Wales Bill.

The University of Wales (No. 2) Bill, which is designed to extend the provisions of the Medical Acts to the University of Wales and to graduates in medicine and surgery thereof, has been read a third time in the House of Lords.

HOUSE OF COMMONS.

WEDNESDAY, DEC. 6TH.

National Insurance Bill Topics.

Sir HILDRED CARLILE asked the Secretary to the Treasury whether, in view of the statement of the Chancellor of the Exchequer that the provisions for consultations and operations under the National Insurance Bill would be a matter for special arrangement, who were the parties to this special arrangement? and whether payments would be made under this head to the hospitals.—Mr. MCKINNON WOOD replied: The parties to the arrangement would ordinarily be the Local Insurance committee, the medical profession, and the patient. The answer to the last part of the question will depend upon the arrangements which are made.

Sir HILDRED CARLILE: Am I to understand that the hospitals will not be consulted in the matter?—Mr. MCKINNON WOOD: I said the medical profession. Of course, the medical profession represents the hospitals.

Sir HILDRED CARLILE: No. The honourable Member proceeded to ask the right honourable gentleman how the Chancellor of the Exchequer proposed to give effect to his intention that members of the medical profession who had shown themselves unfit for the performance of what would become a very responsible public duty must be prevented from securing work under the National Insurance Bill, and in what way doctors remaining on the Medical Register could be regarded as so unfitting themselves.—Mr. MCKINNON WOOD: The Insurance Commissioners will have power after due inquiry, in the exercise of their discretion, to remove from the panel the name of any medical man whose continuance thereon would be prejudicial to the efficiency of the medical service. The honourable Member can hardly expect me to enumerate the various possible causes that might lead the Commissioners to this conclusion, but I may point out that the Commissioners have power to delegate their duties of inquiry to referees appointed for the purposes, and such referees might be constituted as a court of medical inquiry.

Sir HILDRED CARLILE: Are we to understand that the medical men still on the Medical Register would be dealt with in this way and removed from the panels?—Mr. MCKINNON WOOD: A case might conceivably arise. I do not think it is very likely to arise, but in any case the medical committee would be able to express an opinion which would no doubt carry great weight with the Insurance Commissioners.

Sir HILDRED CARLILE: There is no medical committee.

Mr. MITCHELL-THOMSON: Have the doctors any right of appeal?

Mr. MCKINNON WOOD: Yes, to the referees.

Vaccination Officers.

Mr. PETO asked the President of the Local Government Board whether he was aware that the cases of vaccination officers on whose behalf he had intervened to get some compensation by gratuity or otherwise, to minimise their loss by the operation of the Vaccination Act and Order of 1907, were only those who had appealed to the Local Government Board past the guardians, and, seeing that these cases were

consequently only a small fraction of the cases in which loss and hardship had been suffered, and that many of the officers had thought it wiser to suffer loss rather than run the risk of antagonising their employers, whether he would state what action he proposed to take.—Mr. BURNS answered: I have had this subject before me for some time, but I do not at present consider that I should intervene unless I am appealed to. An officer with a genuine grievance need not, in my opinion, be deterred by the consideration suggested from making such an appeal.

The Royal Commission on Tuberculosis.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether, in view of the admission by the Royal Commission on Human and Animal Tuberculosis in their final report that man's liability to infection from tuberculous animals remained a matter only of inference, he would consider the desirability of pursuing further investigations with the object of discovering whether the residence of human tubercle bacilli in the bodies of infant children or adults led to such modification as to render them indistinguishable from bovine tubercle bacilli.—Mr. BURNS replied: In regard to the first part of the question I would draw attention to the statement on p. 35 of the Final Report that the Commission has investigated many instances of fatal tuberculosis in the human subject in which the disease was undoubtedly caused by a bacillus of the bovine type and by nothing else. The conclusion of the Commission is that man must be added to the list of animals notably susceptible to bovine tubercle bacilli. I am not at present prepared to make any statement in regard to future investigations of the subject referred to in the second part of the question, but may I refer the honourable Member to the observations of the Commission on this point which appear on pages 35 to 37 of their final report.

Mr. BATHURST: Are all investigations into this disease at an end so far as the department of the right honourable gentleman is concerned.—Mr. BURNS: Before I answer that question I would suggest to the honourable Member that he should read the final report completely with the last memorandum.

Mr. BATHURST asked the right honourable gentleman whether the statistical information relating to abdominal tuberculosis, stated at page 49 of the Second Interim Report of the Royal Commission on Human and Animal Tuberculosis to have been received from the great hospitals and about to be published in a subsequent Report, had yet been so published; and, if so, what was the reference.—Mr. BURNS answered: A further reference to these records is contained on page 49 of the memorandum attached to the Final Report of the Commission, from which it will be seen that subsequent examination of the records showed that they were of little value for the purposes of the Commission.

Mr. BATHURST asked the right honourable gentleman whether any information had been published either by the Board or by any Royal Commission or Departmental Committee on Tuberculosis as to the efficacy of the process of the pasteurisation of milk in the destruction of tuberculous germs and as to the effect of such process upon its nutritive value; and if not, whether he proposed to institute such investigation.—Mr. BURNS said in reply: Information on this subject is contained in paragraphs 70 to 76 of the report of the Royal Commission on Tuberculosis of April 3rd, 1895. Since that time numerous other observations have been made by other workers, the results of which have been published in various journals. As to the latter part of the question, a report will shortly be published by the Local Government Board.

Mr. BATHURST: Will the results of these different investigations be assembled in one document?—Mr. BURNS: I think that sufficient reference will be made to them by the report which is now in process of preparation by the Local Government Board.

The Health of Postwick.

Sir ROBERT PRICE asked the President of the Local Government Board whether his attention had been drawn to the danger to health which was caused to the inhabitants of Postwick, near Norwich, by the deposit by the Corporation of Norwich of both sewage and dry refuse, and whether the department could do anything to improve this state of affairs.—Mr. BURNS wrote in reply: I have given close attention to this matter and have twice directed a visit by an inspector of the Board to inquire into it. The corporation are now taking steps to remove any cause of nuisance from their sewage farm, and they have improved the conditions under which the refuse is deposited.

Insurance Commissioners for Ireland.

On the motion for the adjournment, Mr. MOONEY asked the Home Secretary whether he was in a position to give information with regard to the Commissioners for Ireland under the National Insurance Bill.—Mr. MCKENNA: The names are: Mr. Joseph A. Glynn, chairman of the Galway County Council, who will be chairman of the Commission, Mr. Walter Kinnear, of Dublin, Dr. Walter Joseph Maguire, of Belfast, and Mrs. Dickie, of the Local Government Board, Dublin, will be the other Commissioners. The secretary will be Mr. J. Houlihan, an experienced member of the upper division of the civil service.

THURSDAY, DEC. 7TH.

The National Insurance Bill and Medical Practices.

Mr. DOUGLAS HALL asked the Chancellor of the Exchequer whether the Government proposed to take any steps to compensate doctors for the loss many of them would suffer in the price obtainable for the sale of their practices owing to the working of the National Insurance Bill when it came into operation.—Mr. LLOYD GEORGE said in reply: I see no reason to suppose that the consequences anticipated by the honourable Member are likely to occur. On the contrary, the value of most medical practices, especially in industrial areas, must be increased by the operation of the Bill.

TUESDAY, DEC. 12TH.

National Insurance Bill Topics.

Viscount WOLMER asked the Prime Minister whether he intended to appoint a Parliamentary Insurance Minister, and if not, who would be responsible to Parliament for the Administration of the Government's insurance scheme.—Mr. ASQUITH replied: The Treasury will be responsible for Part I. (National Health Insurance) of the insurance scheme. It may be convenient that I should state that the joint Committee to be set up under Clause 83 of the Bill will consist of a chairman, the four chairmen of the Commissions, Mr. Bradbury, Mr. Smith Whitaker, and the Chief Registrar of Friendly Societies. The present Under Secretary for the Home Office will be chairman, and will reply in this House in respect of the work of the joint Committee and of the four Commissions, and Sir Robert Morant will be vice-chairman.

Mr. CROFT asked the Chancellor of the Exchequer whether qualified compounders and dispensers of medicines of the Royal Army Medical Corps, having businesses of their own, would be allowed to submit their names as eligible to dispense prescriptions under the National Insurance Bill.—Mr. LLOYD GEORGE answered: Compounders and dispensers of medicine who are qualified under the rules of the Pharmaceutical Society and who have left the Royal Army Medical Corps are eligible to be placed on the list of dispensers under the National Insurance Bill.

Mr. BAIRD asked the right honourable gentleman whether a medical practitioner would be allowed under the National Insurance Bill to have his name included among the list of practitioners in more than one area administered by more than one Local Health Committee.—Mr. LLOYD GEORGE replied: The answer is in the affirmative.

BOOKS, ETC., RECEIVED.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London. KABITZSCH, CURT, Würzburg.

The Accessory Sinuses of the Nose in Children. 102 Specimens reproduced in natural size from Photographs. By Prof. Dr. A. Onodi, Director of the University Clinic for Diseases of the Nose and Throat in Budapest. With a Preface by Prof. Dr. W. Waldeyer, Director of the Anatomical Institute of the University of Berlin. Translated by Carl Prausnitz, M.D., M.R.C.S., L.R.C.P., Head of the Hydrophobia Department of the Hygienic Institute, University of Breslau; late Assistant Bacteriologist to the Metropolitan Asylums Board, London. Price 21*s.* net.

Atlas of Killian's Tracheo-Bronchoscopy. Coloured Plates representing Pathological Preparations from Cases examined during Life by means of Tracheo-Bronchoscopy. By Sanitätsrat Dr. Mann, Director of the Ear, Nose, and Throat Department in the City Hospital, Dresden-Friedrichstadt. Translated by Thomas Guthrie, M.B., F.R.C.S., Liverpool. Price 22*s.* net.

DAVIS (F. A.) COMPANY, Philadelphia. PHILLIPS, STANLEY, 23, Creighton-road, Queen's Park, London, N.W.

Diseases of the Ear, Nose, and Throat, Medical and Surgical. By Wendell Christopher Phillips, M.D., Professor of Otology, New York Post-Graduate Medical School and Hospital. Price 25*s.* net.

Modern Diagnosis and Treatment of Diseases of Children. For Practitioners and Students of Medicine. By Herman B. Sheffield, M.D. (Co-Author of "Practical Pediatrics"), Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital. Price 19*s.* net.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M.D., LL.D., Fellow of the College of Physicians and of the American Philosophical Society; Professor of Therapeutics in the Temple University of Philadelphia. Fourth edition. In Two Volumes. Price, cloth, 50*s.* net; half morocco, 63*s.* net.

Medico-legal Aspects of Moral Offences. By L. Thoinot, M.D., Professor in the Medical Faculty of Paris, Physician to Laennec Hospital; Expert to the Tribunal of the Seine. Translated from the Original French and enlarged by Arthur W. Weysse, A.M., Ph.D. (Harvard), M.D. (Basel), Professor in Boston University. Only Authorised Translation into English. (The sale of this book is restricted to members of the medical and legal professions.) Price, cloth, 12*s.* 6*d.* net.

Diseases of the Stomach and Upper Alimentary Tract. By Anthony Bassler, M.D., Visiting Gastro-Enterologist to the People's Hospital, and Visiting Physician to the St. Mark's Hospital Clinic. Price 25*s.* net.

Handbook of Diseases of the Eye. A Text-book for Students and Practitioners. By Harry Caldwell Parker, M.D., Clinical Professor of Ophthalmology, Indiana University School of Medicine, Indianapolis, Indiana. Price 8*s.* 6*d.* net.

Handbook of Electro-therapeutics. By William James Dugan, M.D., Lecturer on Electro-Therapeutics at Jefferson Medical College, Philadelphia. Price 8*s.* 6*d.* net.

FISCHER, GUSTAV, Jena.

Pathologische Anatomie. Ein Lehrbuch für Studierende und Aerzte. Bearbeitet von L. Aschoff, Freiburg i. Br.; M. Askanazy, Genf; H. Beitzke, Lausanne; C. Benda, Berlin; M. Borst, München; A. Dietrich, Charlottenburg; P. Ernst, Heidelberg; E. v. Gierke, Karlsruhe; L. Jores, Köln; R. Kretz, Würzburg; O. Lubarsch, Düsseldorf; O. Naegeli-Naeff, Zürich; R. Rössle, Jena; M. B. Schmidt, Marburg; H. Schridde, Freiburg i.Br.; E. Schwalbe, Rostock i. M.; M. Simmonds, Hamburg; C. Sternberg, Brünn. Herausgegeben von L. Aschoff, Freiburg i. Br. Zweite Auflage. Erster Band: Allgemeine Aetiologie, Allgemeine Pathologische Anatomie. Price, paper, M.14; bound, M.15.75. Zweiter Band: Spezielle Pathologische Anatomie. Price, paper, M.16; bound, M.17.75.

HEFFER, W., AND SONS, LIMITED, Cambridge.

Arris and Gale Lecture on the Physiology of the Human Labyrinth. Delivered before the Royal College of Surgeons of England on March 18th, 1910. By Sydney Scott, M.S., M.B. Lond., F.R.C.S. Eng., Assistant Aural Surgeon to St. Bartholomew's Hospital. Price 2*s.* net.

MACMILLAN COMPANY, THE, New York. MACMILLAN AND CO., LIMITED, London.

Applied Biology. An Elementary Text-book and Laboratory Guide. By Maurice A. Bigelow, Ph.D., Professor of Biology in Teachers College, Columbia University; Co-Author of the "Teaching of Biology in the Secondary School"; and Anna N. Bigelow, M.S., Teacher of High-School Biology. Price 6*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CAMPAIN, JOSEPH HENRY, M.R.C.S., L.R.C.P.Lond., has been appointed Assistant House Physician at the Sheffield Royal Hospital.

CARR, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Evelina Hospital for Sick Children.

DUNNING, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Cornwall Infirmary, Truro.

EADON, WILLIAM FREDERICK BAILEY, L.R.C.P. & S. Edin., has been appointed Public Vaccinator for the Iron Acton District by the Chipping Sodbury (Gloucestershire) Board of Guardians.

FRAGOSO, W. C., M.B., Ch.B. Edin., has been appointed to the Medical Staff of the General Dispensary, Birmingham.

FRASER, ROBERT, M.B., B.S. Edin., has been appointed Assistant Medical Officer of Health of Derby.

GRACE, ALFRED HENRY, L.S.A. Lond., has been appointed Public Vaccinator for the No. 1 District by the Chipping Sodbury (Gloucestershire) Board of Guardians.

GRAY, H. TYRRELL, M.C. Cantab., F.R.C.S. Eng., has been appointed Surgeon to Out-Patients at the Hospital for Sick Children, Great Ormond-street.

HENDERSON, JOHN, M.D., Ch.B., F.R.F.P.S. Glasg., has been appointed Assistant to the Muirhead Professor of Medicine in the Glasgow University, and Lecturer and Physician to Nurses at the Royal Infirmary, Glasgow.

KEOGH, A. L., M.B., Ch.B.Edin., has been appointed Junior Assistant Medical Officer at the Ayr District Asylum.

MORITZ, ARNOLD, M.B., B.C. Cantab., has been appointed Honorary Medical Officer to the Kensington Dispensary and Children's Hospital.

SAMUEL, H., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Skin Department of the Prince of Wales's Hospital, Tottenham.

TURNBULL, MARTIN, M.B., Ch.B. Glasg., has been appointed to the Medical Staff of the General Dispensary, Birmingham.

WALFORD, HAROLD R. S., M.R.C.S., L.R.C.P. Lond., has been appointed Second Assistant Medical Officer at the Worcester County and City Asylum, Powick.

WAUGH, GEORGE E., M.D. Lond., has been appointed Surgeon to the Hospital for Sick Children, Great Ormond-street.

WHAITE, J. H., M.D., B.Ch. Dub., has been appointed Deputy Medical Officer for the Heavitree District by the St. Thomas (Exeter) Board of Guardians.

WIGMORE, A. J. O., M.R.C.S., L.R.C.P. Lond., M.B., Ch.B. Bristol, has been appointed Assistant House Surgeon at the East Sussex Hospital, Hastings.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHNAL GREEN INFIRMARY AND WORKHOUSE, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £100 per annum, with apartments, board, and washing.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Salary at rate of 52 guineas per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £85 per annum, with board, residence, washing, &c.

BRENTFORD UNION INFIRMARY.—First Assistant to the Medical Superintendent, unmarried. Salary £185 per annum, with apartments, rations, washing, &c.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Dental House Surgeon. Salary £100 per annum, with apartments, board, and laundry. Also Resident Casualty Officer for six months. Salary at rate of £50 per annum, with board, laundry, and apartments.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Resident Medical Officer, unmarried. Salary £90 per annum, with board, lodging, and washing.

CARDIFF, UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Assistant Lecturer and Demonstrator in Physiology, and Lecturer in Physiological Chemistry. Salary to first post is £140, and latter post £60 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Two House Surgeons and House Physician for one year. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

DUNDEE DISTRICT ASYLUM.—Junior Resident Medical Officer. Salary £110 per annum, with board and apartments.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

EVELINA HOSPITAL FOR CHILDREN, Southwark, London, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Ten qualified Clinical Assistants.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, W.C.—Honorary Dental Surgeon.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £30, with board and residence. Also Casualty Medical Officer. Salary £200 per annum, with luncheon.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

LEEDS GENERAL INFIRMARY.—Assistant Clinical Pathologist. Salary £150 per annum.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

MANCHESTER SCHOOL FOR MOTHERS.—Medical Officer. Salary £250 per annum.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and washing.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Soho-square, W.—Honorary Assistant Physician.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £100 per annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Physician.

PERTH ROYAL INFIRMARY.—House Surgeon. Salary £60 per annum, with board.

PRESTWICH UNION INFIRMARY AND WORKHOUSE.—Second Assistant Medical Officer. Salary £100 per annum, with apartments, rations, &c.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and washing.

SHEFFIELD ROYAL INFIRMARY.—Junior Resident Medical Officer. Salary £60 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board, washing, and attendance.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WOKING, BROOKWOOD ASYLUM, Knaphill.—Third Assistant Medical Officer. Salary £150 per annum, with apartments, board, laundry, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, rooms, and laundry.

WOOLWICH INFIRMARY, Plumstead.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Diss, in the county of Norfolk; and at Stromness, in the county of Orkney.

Births, Marriages, and Deaths.

BIRTHS.

COTES-PREEDY.—On Dec. 9th, at Harboro' Cottage, Gerrard's Cross, the wife of Digby Cotes-Preedy, M.A., LL.M., L.S.A., Barrister-at-Law, of a son.

MARRIAGES.

CRUDDAS—LUNHAM.—On Dec. 7th, at Trinity Presbyterian Church, Cork, Major Hamilton Maxwell Cruddas, I.M.S., Queen's Own Corps of Guides, Mardan, India, to Helen Madoline, youngest daughter of the late Thomas Lunham, J.P., and Mrs. Lunham, Lotamore, Cork.

SMYTH—RUBIE.—On Dec. 7th, at Bromley, Kent, Ernest Jackson Smyth, M.D., B.S., B.Sc. Lond., to Marion Janet, second daughter of Edward Rubie, Sidcup, Kent.

DEATHS.

BOND.—On Dec. 5th, at Beaufort-buildings, Gloucester, Francis Thomas Bond, B.A., M.D. Lond., F.R.S. Edin., aged 77 years.

MAPLETON.—On Dec. 10th, at Goudhurst, George Hubert Mapleton, M.B., C.M. Edin., after a short illness.

TREVELYAN.—On Dec. 11th, Edmond Fauriel Trevelyan, M.D., of Park-square, Leeds, aged 52 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

IMPRISONMENT FOR OVERLYING.

PUBLIC opinion has been considerably stimulated during the past few years on the question of infantile mortality, and it is believed that many of the provisions of the Children Act will be found in the course of time to have been the means of bringing about a considerable reduction in the number of deaths of infants. Within the past few months the Brighton coroner has had before him numerous cases of overlying, and on every occasion Mr. J. E. Bush has taken the opportunity of calling attention to the very dangerous practice of parents taking their offspring to bed with them instead of placing them in a cradle or making a bed in a drawer of a chest of drawers or a crude box; in fact, anything rather than the common practice of the child sleeping with the parents. Considerable prominence has been given to the coroner's utterances in the lay press, but apparently with little effect, for in Brighton during October there were no fewer than three cases of overlying. The month of November opened badly with another instance, but as both the mother and the father are now undergoing a term of imprisonment there should be, and perhaps will be, an appreciable absence of these cases in the Brighton coroner's court. There were certainly some very aggravated circumstances in the latter case. A railway employee and his wife had spent the evening together drinking and both went home, the husband "absolutely drunk and the wife not so drunk but under the influence of drink," according to the evidence. The man engaged in a street brawl with a male lodger, inflicting such injuries upon that individual as to necessitate hospital treatment. The husband and wife then went to bed, taking their month-old child with them, and in the morning the child was dead. A medical man found that the thymus gland was five times its normal size. Acting on the advice of a nurse the mother had purchased a cradle for the child, but pending the preparation of the bedding the cradle was only the bed of a cat. It is scarcely necessary to add that bearing in mind the condition of the parents the jury found there was negligence, but which did not amount to culpable negligence, and in returning a verdict of "Death from suffocation" the jury was agreed that the parents had rendered themselves liable under a section of the Children Act to summary conviction before the magistrates. The opinion was further expressed that it was time severe steps were taken in the matter. The National Society for the Prevention of Cruelty to Children at once instituted proceedings in the police-court, and on Nov. 16th both father and mother were sent to gaol for two months, the justices telling them that they were lucky in not being proceeded against on a charge of manslaughter. It was the first prosecution of the kind in Brighton, and it will be interesting to note what effect the sentence has upon parents who will not take heed of the frequent warnings that are given to them.

FEDERATED MALAY STATES: MEDICAL REPORT.

THE Federated Malay States are situated on the mainland of the Malay Peninsula, and are closely connected with the Straits Settlements; they consist of the States of Perak, Selangor, Negri Sembilan, and Pahang, which by treaty in 1895 renewed their engagements with the British Government and are administered under the advice of a British Resident-General, who controls the Residents subject to the instructions of the High Commissioner, who is also Governor of the Straits Settlements. The first three States named are on the west coast and extend from the border of Province Wellesley to that of the independent State of Johore. Pahang is on the east coast. All are governed by their native rulers under the above-mentioned control. Kuala Lumpur, the capital (population 40,000), is distant 8500 miles from London (transit, *vid* Penang, 21 days). The official report for 1910 has just been presented to Parliament. Subjoined is a summary of the medical section of the report. The death-rate, on the estimated population of the States—1,001,257—was 32·16 per 1000. The number of in-patients treated in hospitals was 80,824, as against 73,192 in 1909 and 84,105 in 1908. The death-rate there was 8·15 per cent., the lowest recorded. Of the 6192 deaths, 1092 were due to malaria, 1234 to dysentery, and 1357 to pulmonary diseases. The record number of 217,407 out-patients were treated during the year. The travelling dispensaries, which include dispensary boats on the Perak and Pahang rivers, supplied aid to the large riverside population and to places where no regular dispensaries are established. Anti-malarial measures have engaged attention. Some $21,000 were expended during the year on drainage and reclamation of swampy land at Kuala Lumpur; similar works have also been executed in Klang, Port Swettenham, Batu Gajah, Seremban, and elsewhere. Large quantities of quinine were also distributed. During the year 1909 there were no cases of cholera or plague, but unfortunately during 1910 cholera broke out in Perak, Selangor, and Pahang. It is believed that the outbreak at Pahang was introduced from Siam and that in the other two States from India. There were 378 cases and 332 deaths. 225 cases of small-pox were recorded, 60 of which were fatal. During the year 1909 33,782 persons were vaccinated; during 1910 the number rose to 121,563. The number of known successful vaccinations was 80,617, and of unsuccessful 8561; the remainder were not verified. At the Institute for Medical Research the investigation into the etiology of beri-beri was proceeded with. An inquiry on the distribution of anophelines was commenced and will be continued for the purpose of obtaining further data regarding the malaria-carrying mosquito. 246 reports were furnished on the examinations of specimens submitted by the medical and veterinary departments. In addition to 764 general analyses, a number were carried out in the research on beri-beri. 136 analyses were made under the Deleterious Drugs Enactment, and 94 of these were samples of anti-opium pills; the analyses proved that 89 of these samples contained a large proportion of opium or morphine.

HANDBOOKS ON DISINFECTION.

Messrs. Newton, Chambers, and Co., Limited (Thorncliffe, near Sheffield), ask us to state that they will gladly send their series of handbooks on disinfection to readers of this journal on receipt of a post-card. "Medical Izal" contains reprints from the principal medical journals of papers dealing with the use of izal in the treatment of phthisis, puerperal sepsis, tropical dysentery, enteric fever, cholera, and tinea favosa capitis. "Practical Disinfection" deals with the domestic uses of izal. "The Veterinary Handbook" is full of useful information for owners of horses, dogs, cats, poultry, &c. The last of the series, "Izal in the Dairy," apart from its purpose as an advertisement, is a really useful handbook at a time when the conditions of milk production are claiming so much attention.

SOUTH AMERICAN PARASITES.

A VALUABLE collection of parasites infesting human subjects and domestic animals in Dutch Guiana and a number of preparations illustrating them have been presented to the University of Utrecht through Dr. E. A. Koch, of the Dutch Colonial Medical Service in Paramaribo.

THE DOMEN ADHESIVE ELASTIC BANDAGE.

WHEN noticing this excellent make of elastic bandage we mentioned, owing to a misunderstanding of the description, that it contained no lead; we find that this is an error, but it does not affect the value of the plaster for the purposes for which it is intended. It is certainly a very useful and convenient form of strapping.

Rapier.—Our correspondent should advise any of his patients against having recourse to the treatment. The whole matter is still under our consideration, but we have already enough evidence to justify this warning.

Si Opus Sit.—Our correspondent's idea is ingenious and the coincidence is humorous.

"*Not to be Swallowed*" has failed to give his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

Dec. 19th-23rd (Moscow).—Third Pan-Russian Therapeutical Congress.
,, 27th-30th (Baltimore).—American Physiological Society.

In 1912:—

Jan. 20th-27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th-14th (London).—Central Poor-Law Conference.
March 7th-11th (Berlin).—Thirty-third Balneological Congress.
,, 23rd-April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st-7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th-20th (Rome).—Seventh International Congress on Tuberculosis.
,, 15th-18th (Wiesbaden).—Twenty-ninth German Congress for Internal Medicine.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th-17th (Washington).—Ninth International Red Cross Conference.
,, 27th-June 1st (London).—Eighteenth International Congress of Americanists.

May (London).—International Horticultural Exhibition.
June 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
,, (London).—Missionary Exhibition.
,, (Dublin).—Celebration of the Bicentenary of the School of Physic in Ireland (Medical School of Trinity College, Dublin).
July 2nd–5th (London).—Congress of the Universities of the Empire.
,, 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
,, 12th–16th (London).—Imperial Conference of Teachers' Associations.
,, 19th–27th (Liverpool).—British Medical Association, Eightieth Annual Meeting.
,, 24th–30th (University of London).—First International Eugenic Congress.
,, 25th–28th (Berlin).—Royal Institute of Public Health.
,, 29th–August 3rd (York).—Congress and Exhibition of the Royal Sanitary Institute.
Aug. 5th–10th (Oxford).—Second International Congress of Entomology.
,, 7th–10th (Glasgow University).—Thirty-second Annual Meeting of the British Dental Association.
Sept. 4th (Washington, D.C.) and Sept. 6th–13th (New York).—Eighth International Congress of Applied Chemistry.
,, 10th–12th (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
,, 23rd–28th (Washington, D.C.).—Fifteenth International Congress on Hygiene and Demography.
September (Prague).—International Congress of Radiology and Medical Electrology.
(Budapest).—Tuberculosis Exhibition.
(Stockholm).—Olympic Games.
(Düsseldorf).—Third International Medical Accident Congress.
(Perth, Western Australia).—(Three days.) Health Congress.
In 1913:—
(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.
Aug. 6th–12th.—(London).—Seventeenth International Congress of Medicine.
,, 22nd–28th (Cambridge).—International Mathematical Congress.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Chicago).—Congress of the International Association of Refrigeration.
(Paris).—Congress of Physical Education.
(Milan).—Fourteenth International Anti-alcoholic Congress.
In 1914:—
(Vienna).—Third International Congress for Professional Diseases.
(Auckland, N.Z.).—Australasian Medical Congress.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL METEOROLOGICAL SOCIETY, Institute of Civil Engineers, Great George-street, Westminster, S.W.

WEDNESDAY.—7.30 P.M., Mr. W. Larden: Solar Halos and Brocken Spectres.—Mr. W. H. Dines: The Statistical Changes of Pressure and Temperature in a Column of Air that accompany Changes of Pressure at the Bottom.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon: Dr. Bernstein:—Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Pritchard: Clinical Pathology.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Etherington-Smith: Clinical. (Lecture II.)

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Dr. Beddard: Practical Medicine. (Lecture VI.)

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham): Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Pathological Demonstration (Dr. Duncan).

TUESDAY.—Clinic: 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. B. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen): Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Pathological Demonstration (Dr. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld): Surgical (Mr. E. Gillespie): Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Pathological Demonstration (Dr. Duncan).

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lecture:—Dr. J. Atkinson: Nose.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Baldness: Its Causes and Treatment.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.). Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (23rd).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 13th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 7	29·54	S.W.	0·15	46	46	38	42	43	Raining
,, 8	29·77	S.W.	0·20	57	45	35	35	36	Fine
,, 9	29·42	W.	0·27	63	45	36	41	41	Raining
,, 10	29·44	S.W.	...	47	47	41	43	43	Raining
,, 11	29·13	W.	0·45	70	48	41	41	44	Fine
,, 12	29·65	S.W.	...	59	50	38	40	41	Foggy
,, 13	29·52	S.	...	61	47	41	44	46	Cloudy

The following journals, magazines, &c., have been received:—Archives of the Middlesex Hospital, Journal of the Royal Army Medical Corps, Indian Public Health, Knowledge, Cleveland Medical Journal, Monthly Cyclopædia, Journal of the Royal Sanitary Institute, Revue de Gynécologie, Archives Internationales de Neurologie, American Journal of Medical Sciences, L'Hygiène de la Viande et du Lait, Tuberculosis, Annales des Maladies des Organes Genito-Urinaires, Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, Military Surgeon, St. George's Hospital Gazette.

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[*Acknowledgments continued on next page.*

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